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Democratic Citizenship and Moral-Religious Values. Axiological Benchmarks in the Education for Democratic Citizenship

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Democratic Citizenship and Moral-Religious Values. Axiological Benchmarks in the Education for Democratic Citizenship

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| Abstract | Democratic citizenship as a concept is not limited to acquiring the legal status of citizen and the right to vote or to be elected in office, which this status grants to individuals. It includes a large range of aspects, from civic conscience, thought and participation, to the political, legal, economic and cultural dimensions of public life in a democratic society. Over the last decades, however, numerous controversies have broken out in the context of strong emerging of the secularization of public life, in terms of tackling the moral and religious dimension of citizenship. In this context, we believe that launching a debate concerning democratic citizenship means looking for appropriate answers to questions such as: What is the relationship between citizenship and religion? How do religious moral values influence the significance of the idea of democratic citizenship? What consequences do they have on education? How are all these aspects operationalised in educational practice? In this study, we are considering the potential answers to such questions. |

Keywords:
democratic citizenship, religion, moral-religious values, education

| Zusammenfasung | Demokratische Staatsbürgerschaft als Konzept beschränkt sich nicht nur auf den Erwerb des rechtlichen Status eines Bürgers und des Wahlrechts oder im Amt gewählt werden, die dieser Status Einzelpersonen gewährt. Es umfasst eine breite Palette von Aspekten, von bürgerlichem Gewissen, Gedanken und Partizipation bis hin zu den politischen, rechtlichen, wirtschaftlichen und kulturellen Dimensionen des öffentlichen Lebens in einer demokratischen Gesellschaft. In den letzten Jahrzehnten haben sie jedoch zahlreiche Kontroversen im Zusammenhang mit starker Auftritt der Säkularisierung des öffentlichen Lebens ausgebrochen, in Bezug auf die moralische und religiöse Dimension der Bürgerschaft zu bekämpfen. In diesem Zusammenhang sind wir der Ansicht, dass die Einleitung einer Debatte über die demokratische Staatsbürgerschaft die Suche nach angemessenen Antworten auf folgende Fragen bedeutet: In welcher Beziehung stehen Staatsbürgerschaft und Religion? Wie beeinflussen religiöse moralische Werte die Bedeutung der Idee der demokratischen Staatsbürgerschaft? Welche Folgen haben sie auf die Bildung? Wie werden all diese Aspekte in der pädagogischen Praxis operationalisiert? In dieser Studie betrachten wir die möglichen Antworten auf solche Fragen. |

Schlüsselworte:
demokratische Staatsbürgerschaft, Religion, moralisch-religiöse Werte, Bildung.

1. Introduction

Democratic societies are characterized by affirming and asserting the rights and duties of all citizens, as well as by their responsible involvement in the affairs of their communities. Furthermore, cohesion and social solidarity, legal and moral order are also an intrinsic part of an authentic democracy. Any theoretical approach to democratic citizenship inevitably incorporates an outlook on a series of fundamental values, such as freedom, responsibility, equality of rights, tolerance, justice, equity, diversity and solidarity. Appropriate civic behaviour is based on specific norms and rules established in the spirit of such values.

Citizenship is a legal and political status that allows the individual to participate in public life, but it also represents a role citizen assume as an expression of belonging to a political community. We can say that approaching citizenship from a status perspective is based on a legal interpretation, while the approach of citizenship as a role assumed by an individual, refers to its cultural meaning and civic identity. Nonetheless, democracy and, hence, democratic citizenship is not just a form of political organization, a way in which institutions function or a way of organizing social relations, it is above all, a moral exigency (Burdeau, 1989). Civic behaviour is a social and political construct, but at the same time, it has a significant moral essence. In many circumstances and public life situations, the behaviour of individuals is judged, measured and appreciated from a moral perspective and many citizens use a religious moral reference system in "judging" their peers. This is one of the reasons why the implementation of a well-defined

operational plan on Education for Democratic Citizenship engages the moral formation of the individual, to the extent that, through its content, the plan also focuses on the regulation of human relations, which are established under appropriate and desirable social values, norms, principles and rules. All these aspects are shaping the moral system of any society; for many citizens, all these regulations are comprised and fostered by a moral-religious system they conform to for most of their lives. Since civic behaviour is not a given, its shaping and subsequent development can be achieved through the Education for Democratic Citizenship. This form of education responds to the societal need to initiate citizens in the culture of democracy, to prepare them to act in accordance with the values and norms that are desirable in any democratic society. At society level, we can identify a series of axiological structures that incorporate universally valid values, norms and attitudes. Once integrated into the personality structure of individuals through education, these structures serve them as indicative guides in everyday life, as evaluation criteria in interpersonal relationships and as standards for their decisions and actions.

Citizenship implies the sharing of values and assumes that people understand, tolerate and possibly support different principles and values. Many scholars in the field of social sciences research consider that there are inherent differences in how people feel and think about public life (Niemi, Junn, 1998). Among the fundamental grounds of any democratic society are the affirmation of pluralism of values, the tolerance of differences and the encouragement of the individual's autonomy. From our perspective, this means that the education for democratic citizenship should explicitly regard morals as an essential element, assumed and valued from different standpoints: morality as a personal option of everyone, given by God, or as a social convention one must accept and practise in order to function as a fully adjusted member of society.

2. Literature Review

2.1. Religion and Citizenship in the Age of secularisation

The modern debate on citizenship has up until now focused on three major components: the civil element (fundamental human rights), the political element (the

right to participate in the wielding of political power, as a member of an organisation exercising political authority, or as a voter of members of such a body) and the social element (the right of individuals to a certain standard of living, as well as their social and economic rights). Beyond these theoretical considerations, the discourse on citizenship evolved and expanded beyond the legal and political domains, placing an increasing accent on the cultural component of citizenship, which is based on the individual's right to establish freely their own axiological consciousness, essential in assuming the status of citizen. Citizenship is more than a legal status or a mere political practice; it is also a way of participating in public life (Stokes, 2008). The attitudes and behaviours individuals are expected to express in civic life must be in line with the values of any democratic society. These values combined to shape a cultural matrix that for most citizens also incorporates religion. The concept of "cultural citizenship" has thus emerged (Rosaldo, 1999; Ong, 1999). Winarnita (2008), for instance, defines cultural citizenship as an expression of involvement in the cultural realm of a given country, even in the absence of legal or official citizenship. In many cases, the approach of citizenship in a democratic society has been and still is dominated by a secularist perspective, which has gone so far as to claim that democracy can only be possible if religion is separated from politics, law and ethics. Moreover, it has been increasingly argued that religion is a private matter, and public space must, therefore, remain secular.

The theory of secularization started to develop since the 1960s, inspired by the works of Max Weber, *Die protestantische Ethik und der Geist des Kapitalismus* (1904) and *Religionssoziologie* (1920), in which the prominent German sociologist argued that the values of modern Protestantism and capitalism lead to a "disenchantment" of the world. Max Weber's idea was taken over and further developed by Parsons (1966), Luckmann (1967) and Berger (1969). In The Sacred Canopy (1969), Berger claims that modernity, with its capitalist and individualist ethos dominated by rational values, is, in fact, secular modernity resulting in the decreasing of the force of religion as a hegemonic vision of the world. Consequently, religiosity will be limited to a rather private and reclusive world, manifesting itself almost exclusively as an intimate, innermost virtue (Berger, 1969).

In this respect, many scholars in the domain argue that secularisation generates pluralism by destroying the transcendental authority of religion as the only source of truth. Thus, religion no longer has dominion, it cannot control or regulate the activities of society and the behaviours of individuals; furthermore, religion no longer inspires the faith of communities and can no longer impose common values (Rémond, 2003). One of the most visible aspects of secularisation is the effect on religious morality; individual consciousness has sovereign power over moral norms and religious identity. The source of religious faith is the individual's consciousness, not a transcendent reality; it is a matter of choice for individuals or for families rather than a means by which the members of a community share a common understanding of the world. The process of modernisation of society must be seen as a process of functional differentiation, emancipation and separation of the secular entities, essentially of the state, economy and science, from the religious sphere (Casanova, 1994). Differentiation is one of the main components of the theory of secularisation that brought on the so-called 'disenchantment' of the world, the separation between state and religion, as well as the development of autonomy of politics, education, scientific, economic and other institutions, from the religious establishment.

Religion offers a form of authoritarian morality originating in the ten divine commandments, while autonomy is the true nature of morality (Hirst, 1974; White, 1993). Following the provisions of such precepts requires religious faith, which ultimately depends on personal choice, but cannot be considered in contemporary secular contexts. In addition, it has been convincingly argued that morality can exist independently of religious faith (White, 1993). In the academic discourse on Western multiculturalism, religious diversity is neglected in favour of cultural and ethnic diversity; hence, most academic works on multiculturalism barely mention religion. Nonetheless, quite a few scholars seem to reject the theory of secularization (Casanova, 1994; Chaves, 1994; Stark, 1999; Stark, Finke, 2000; Parker, Hoon, 2013). The unequivocal distinction between institutional secularisation, the separation occurring between the social system and individual religiosity is a false problem since the secularisation of public space does not invariably lead to the loss of individual religious feelings and commitment (Willaime, 2001). In the modern world,

religion has not been dissolved; on the contrary, we are witnessing the dynamics of a heterogeneous world in which religion remains an important, vital social and political force, even in the context of modern pluralism. Many people live their lives according to a religious view of the world, which could lead us to believe that the predictions regarding the secularisation of the world are premature (Parker, Hoon, 2013). Searching for a meaning that transcends the narrow space of empirical existence in this world has been a serious concern of human existence in all societies over the millennia, yet secularisation has largely deprived individuals of their transcendental perspectives over the world and limited the role of institutionalised religion in the public sphere.

Democracy is not the gravedigger of religious expressions, on the contrary: religious tolerance and freedom of religious belief can easily go hand in hand with democracy, given the fact that religions accept the epistemic situation of a world that is the subject of pluralism of visions in all respects. Social space must guarantee the right to diversity (Albulescu, Albulescu, 2017). Thus, the principles of religious freedom and tolerance are closely linked to the development of liberal democracies and are, in fact, at the basis of this type of political construct (Larouche, 2006). They are and should be considered as fundamental rights: "we cannot deny that there is a conceptual link between the universalist foundation of the fundamental right to religious freedom and the normative foundations of any constitutional state, in other words, between democracy and human rights" (Habermas, 2003, pp. 153-154). The democratic idea of religious tolerance is based on respect and on acknowledging the free practice of one's religion in a given community. In a democratic society, religious freedom is a fundamental, intrinsic right of any person who may or may not choose to adhere to certain values. In a democratic society, citizens may choose not to be worshippers (from a religious standpoint), but believers are inherently considered citizens, individuals who are free to express their religious freedom, nonetheless. Citizens can base their actions on religious values in order to pursue the "common good"; this is a model that can be found in most religious traditions and is accessible to believers and non-believers likewise. The pursuit of the "common good" allows members of a community to build bridges and maintain a constructive dialogue with their peers, despite the religious, ethnic, ideological or cultural

differences between them. Nökel and Stauth (2005) claim that secular public life should be open to religious expressions and manifestations as a need for communication in the context of democratic systems where communities base their values on togetherness, as well as on differences and diversity.

2.2. The moral dimension of democratic citizenship

From a common-sense perspective, the term "morals" designates a set of standards in relation to which individuals, groups or entire communities decide to adapt and govern their behaviours, by making a clear distinction between the legitimate or acceptable and the illegitimate and unacceptable, in pursuing their goals. This type of perspective on things leads us to understand morality as a daily practice, as a phenomenon that is experienced directly by individuals; those supporting and favouring it may derive the satisfaction of being appreciated and rewarded, or, on the contrary, may be put to the inconvenience of being denigrated by someone or by public opinion. However, not all uses of the term morality must be associated with a concrete activity. In our opinion, the purely spiritual charge of the term itself is full of meaning. We can talk about the existence of moral norms applicable to specific domains or concrete activities, but there are also moral standards and norms applicable to all people, regardless of the particular situation in which they might find themselves. Morality is an essential dimension of human existence, of social expression, as well as of well-balanced relationships between peers. From an operational perspective at a micro (individual, groups) and macro level (communities and societies), morality can and should be considered as a vital element in the education for democratic citizenship, since "democratic citizenship is the means by which members of a moral community project the norms and values they adopt and abide by, into the public space" (Miroiu, Blebea Nicolae, 2001, p. 73). In a democratic society, the association between morality and citizenship is necessary because the moral dimension is one of the most important ingredients in regulating appropriate human relationships.

The morality of modern man must cope with the pressure of instrumentalization; for many of our peers, morality has become a mere code of conduct, regarded as a system of rules, provisions and duties that establish the

behavioural standards inherent in practicing a profession (part of the legal, medical ethics, etc.) or in a certain sphere of activity (business ethics, for instance). Morality is thus reduced to the formal observance of arbitrary rules, beyond which the life of individuals often boils down to a sum of masks and roles with moral function, which they play out in various circumstances of public life. Furthermore, morality is reduced to a conformist attitude and behaviour in relation to the expectations of others and to an appearance of moral involvement with our peers. Under such circumstances, the morality based on Christian precepts understood as an inner experience that generates sense and meaning to the human existence, and as a manifestation of authentic human dimensions suffers. Any social practice involves norms and rules that must be observed. When one devotes themselves to a certain practice, it involves accepting the authority of the norms concerned; moreover, the need to adjust and match one's own performance in accordance with the moral principles they abide by it also involves submitting one's own attitudes, choices, preferences and tastes to the already adopted regulations and standards, which commonly defines practice (MacIntyre, 1998). Rules are obviously not immune to criticism, but we cannot engage in a certain practice without first accepting the authority of the best standards achieved so far in that particular field. Respect for norms, which are intrinsically part of practice, also implies fairness in judging one's own person and actions, as well as those of others. This type of morality works mainly by influencing and sometimes coercing people to display certain attitudes and behaviours. At the same time, even a narrow-minded type of morality is unlikely to function entirely in the language of norms. On the other hand, when we discuss the notions of "citizenship" and "civic behaviour" we can only relate to the notion of "morality" since citizenship involves a moral responsibility towards our peers (Dalton, 2008).

The moral relationship is one of the many forms of regulating human cohabitation. It calls for such behaviour that ensures the promotion of social connections and benefits, along with the private interests that cannot be ignored. Its structuring and regulatory role lie in the fact that it urges individuals to display socially accepted behaviours. Morality integrates a certain system of commandments that indicate what choices are socially appreciated, accepted and even treasured; this is one of the reasons why from the perspective of these

commandments, various human relationships appear expressed in an ideal form. A behaviour based on moral precepts is only one of the possible behaviour's individuals may exhibit in society, hence the need to evaluate the actions of our peers, which can occur on several levels. The community can judge the one who displays a certain behaviour, but they can also self-assess their actions from a moral standpoint. The act of assessing one's own and other individuals' behaviours is a specific form of manifestation of the moral relationship.

Among the values of civic behaviour that can obviously be observed at the level of different individually and collectively-displayed behaviours, we can mention some of the essential moral values, such as responsibility, solidarity, equality, dignity, respect for others, respect for property etc. Therefore, civic behaviour is viewed as a moral quality worth having and developing, and, over time, civic education itself has often been integrated into moral education, or it has often been considered that morality is the basis of civic culture. Calling on Christian ethics, which is and has been done in various circumstances of social life, is often viewed with mistrust since for many people, the words "morals" and "morality" fall under the sign of relativism of everyday life rules. For some, on the other hand, moral-religious education and the education for democratic citizenship are closely linked, while for others, the education for democratic citizenship must be discussed independently from any subject concerning Christian morality.

Citizens' opinions in a pluralistic society may converge towards a certain moral sense that serves public or private purposes. If this can occur, then it is most probably possible for the education for democratic citizenship to promote a certain perspective on morality, without excluding or undermining other points of view. Some of us might be familiar with the notion of morality and all the aspects it encompasses, which for some may seem obvious, but certainly, individuals have the right and freedom to see differently on the matter. Christian ethics does not present itself as a list of prohibitions or mandatory requirements inaccessible to human reason, but as "a light for action" (Jacob, 2015). Neither rigid nor lax, this type of morality is intended to be entirely realistic since its precepts are not being exclusively used by Christians, but universally acknowledged, beyond any

cultural, religious and particularities individuals, groups or communities might have.

Cultural identity spans religious symbols but does not exclude them. The religious factor is not limited to the visible effect of its own symbols on the cultural plan, thus contributing to the construct of social sense, as well as to the integration and participation of each individual in public life. The religious factor has an ethical function and a strong influence on the ethos and behaviour of individuals, given the fact that a deep sense of identity of believers comes from these symbols. In this respect, religion fulfils an important function: it motivates the individual to seek introspection and regard themselves as a moral subject, assimilating the Good as a value to the idea of a good life, which can structure the identity of individuals and serve as a principle of group integration (Tétaz, 2002). In our opinion, religious beliefs help to shape the moral identity of individuals in a particular cultural environment, while internalised religious values can intellectually and emotionally mobilise people and nurture their deep identity.

2.3. Adopting moral-religious values in the Education for Democratic Citizenship

One of the essential goals of education for democratic citizenship is to promote the culture of democracy and those individual qualities that would make it possible to exercise effectively one's citizenship. Citizenship is context-related, meaning that it can simultaneously have culturally diverse content, given the different mentalities and identities, in accordance with the political community they pertain to. The sense of belonging is based on shared values, a sense of identity and common historical and cultural heritage. Cultural rights, supported by the need to respect diversity, are viewed as a new form of human rights, alongside the political rights, economic and social rights. From this perspective, we can assume that just as tolerance makes no sense outside preconceived ideas, the knowledge of religious principles itself, which structure people's identity and induce ethical values and norms, becomes a key requirement of citizenship.

In our view, religious ethics and culture add considerably to the education for democratic citizenship and will enable tomorrow's adults to pass the test of critical and responsible openness to religious issues in the

public space (Larouche, 2006). Education for democratic citizenship involves theoretical and operational approaches with a direct impact on the harmonious construct of the personality of each individual and on their relationships with peers, as well as on the development of personal and collective identities and on the circumstances of social integration and harmonious cohabitation. In this respect, Cairns (2001) argues that we should not reject the religious dimension of our modern secular cultures; on the other hand, it is necessary to contextualize the values that our societies and educational systems support, given the fact that students are also members of a society preserving and cherishing certain traditions, values and religious practices. Since religious beliefs may have a powerful influence on students' thoughts and behaviours, education should seriously take them into account (Greer, 1983).

There is no doubt that people without religious beliefs, the "non-believers", in other words, can be moral. Even the opponents of religious education can offer moral guidance (White, 1993), even more so as it is often considered that linking together religious, moral and civic education no longer satisfies the actual educational needs (Jackson, 2004). Hirst (1972, 1981) on the other hand, suggests that education and religion are two separate and autonomous forms of interpreting human experiences; therefore, they are logically different from one another. Hirst claims that religion is compatible with a primitive vision of education, but is, however, incompatible with a contemporary conception of education, where the main goals are rationality and objectivity. In contrast, other prominent scholars argue that there is a close link between religious, moral and civic education (Jackson, 2004; Gearon, 2004), by virtue of national, ethnic, religious and cultural identity. From their perspective, religious education can help improve the understanding of citizenship and democratic education of citizens who decide to actively and responsibly participate in the civil matters of public life. Moral-religious values can play an important role in the achieving of education for democratic citizenship, mainly in understanding various social and cultural aspects. The real challenge here is to ensure that people fostering different religious, ethical and moral values, as well as different social, cultural, and linguistic traditions can live together in harmony (Hargreaves, 1994). In addition, schools must offer the appropriate framework where children should be able to

fully understand their religious identity as part of their general identity; moreover, all schools should promote it in order to ensure mutual respect and understanding among their students (Miedema, 2006). Such education should support and encourage peaceful cohabitation based on the respect and acknowledgement of the right to religious freedom (Engebretson, 2009).

Education for democratic citizenship is designed to ensure the development and empowerment of individuals to actively participate in all aspects of public life, from voting to specific interventions that aim at influencing political decision-making, from defending and promoting their own rights to behaving responsibly in society. Education teaches people their responsibilities as citizens (Kymlicka, 2001; Weisbrod, 2002; Weinstock, 2004). This is one of the main reasons why every individual should benefit from this form of education so that they understand that democracy does not appear and develops by itself but depends on the participation and involvement of everyone. Another useful lesson it could teach us is that positive results are achieved in terms of public efficiency and personal prosperity, social justice, individual achievement, morality, etc., only by involving all citizens.

However, the education for democratic citizenship is not limited to one or several disciplines included in the curriculum, to which extracurricular activities are added. It also does not limit itself to a certain field of knowledge or a to a predetermined form of social action; it is not restricted to certain institutional frameworks and does not manifest itself only at a certain point in the life of an individual, but transcends all these aspects, by integrating them in a coherent ensemble (Bîrzea, 2000). Therefore, education for democratic citizenship is achieved through multiple interconnected educational approaches. Likewise, the school environment is very important in cultivating the values of democracy. It has often been argued that, in terms of cultivating the values of democracy, the school ethos can effectively overcome the curriculum and the actually taught courses (Taylor, 1996). On the other hand, Donnelly (2000) suggests that school ethos can be described as a phenomenon that expresses the social reality of a school or because of the social interaction existing within that educational institution. Achieving the goals of the education for democratic citizenship is based on fundamental values according to which attitudes and behavioural norms are structured.

However, it is necessary to accept the pluralism of moral and religious values, the sensitivity to other cultures and intercultural dialogue, which do not exclude the existence of a common set of values and principles on which civic identity is based. Teachers need to raise their students' awareness of the moral dimension of social and political issues (Kibble, 1998; Pring, 1999), all the more so since there is a sense of lack in this respect (Davies 2000; Kerr 2000). The potential success of the education for democratic citizenship in schools depends largely on the involvement of students in the debate of real-life situations (Campbell, 2005; Pasek, Feldman, Romer & Jamieson 2008; Torney-Purta, 2002). However, schools offer few opportunities to students in this respect, while they prefer to provide educational content in an academic form (Torney-Purta, 2002).

The individual develops as an autonomous personality through maintaining relationships with others and in line with certain values they hold. Exercising the status as a citizen in a democratic society also involves an ethical component, for many of us, an essential ethnic and religious aspect of living in society. Moral values such as freedom, justice, equality, tolerance and solidarity, require self-respect and respect for our peers, the ability to maintain civil and respectful communication, the ability to reflect and self-reflect on violence in society, and how it can be controlled in order to resolve conflicts, etc. Internalising these values also implies the acceptance of differences and diversity, including those rooted in religion, the fostering of recognition and appreciation, trust in others, etc. Religion guides human behaviour through a series of commandments, passed down as ideal models of conduct. From such a perspective, religious morality provides the foundation for any educational approach. From the perspective of believers, any educational action is permanently linked to this fact; education is the starting point, since it provides the content for growth, and it also serves as a fundamental goal, through the criteria on which the assessment of the level of goal achievement and of school performance is based.

3. Conclusions

The behaviour of individuals in society is governed by values and norms, of traditions and customs, all being viewed as factors determining certain types of conduct.

The active participation of the individual in the life of their community is conditioned by the internalisation of these axiological milestones, by the level of development of the social and cultural dimensions of their personality, achieved by major educational influences from the individual's entire social environment. Education for democratic citizenship can be achieved through different manners and formats; it is, in fact, a continuous approach that starts in early childhood and is reinforced especially throughout the school years. In the form under which it is carried out in schools nowadays, education for democratic citizenship ignores the fact that moral-religious values are relevant to the construct of a good citizen's character. For example, in the school curriculum for the discipline Civic Education, 3rd and 4th grades (2014) and in the curriculum for the discipline Social Education - Education for Democratic Citizenship, grade 7th (2017), the meaningful references relating to religion, religious identity, and moral-religious values, are missing. Education for democratic citizenship goes beyond the school environment since it is also achieved through contributions from organizations that have a genuine formative potential (the Church, mass media, NGOs, etc.). This type of education involves lifelong learning, in any social condition and in any form of human activity, in order to ensure the acquiring, renewal, completion and improvement of a wide range of knowledge and skills that are key to the success of the individual's participation in public life.

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Correlates of senior secondary school students' mathematics achievement

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Correlates of senior secondary school students' mathematics achievement

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Abstract	
Keywords: Mathematics achievement; mathematics anxiety; mathematics self-concept; mathematics self-efficacy; motivation to learn mathematics	This study examined mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics as correlates of mathematics achievement among 2500 senior secondary school year two students from 20 co-educational public schools in Lagos State of Nigeria using the quantitative research method within the blueprint of the descriptive survey design of an ex-post facto type. Data collected were analysed using the descriptive statistics of mean, and standard deviation and inferential statistics of Pearson product moment correlation and multiple regression analysis. Findings revealed that the five independent variables (mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics) jointly contributed a coefficient of multiple regression of .846 and a multiple correlation square of .715 to the prediction of senior secondary school students' achievement in mathematics. By implication, 71.5% of the total variance of the dependent variable (mathematics achievement) was accounted for by the combination of the five independent variables. Based on this study, it was thus, suggested that appropriate intervention strategies that could improve students' mathematics self-efficacy, mathematics self-concept, mathematics achievement, and motivation to learn mathematics but lessen their mathematics anxiety should be implemented in Nigerian senior secondary schools.

Zusammenfasung	
Schlüsselworte: Mathematikleistung; Mathematik-Angst; mathematisches Selbstverständnis; Mathematik Selbstwirksamkeit; Motivation, Mathematik zu lernen	Diese Studie untersuchte die Selbstwirksamkeit der Mathematik, das Selbstkonzept der Mathematik, die Mathematikangst, die intrinsische Motivation in der Mathematik und die extrinsische Motivation in der Mathematik als Korrelate der Mathematikleistung unter 2500 Schülern der Sekundarstufe II von 20 koedukativen öffentlichen Schulen im Bundesstaat Lagos Nigeria unter Verwendung der quantitativen Forschungsmethode im Rahmen des Entwurfs einer deskriptiven Umfrage eines Ex-post-Faktotyps. Die gesammelten Daten wurden unter Verwendung der deskriptiven Statistik des Mittelwerts und der Standardabweichung sowie der Inferenzstatistik der Pearson-Produktmomentkorrelation und der multiplen Regressionsanalyse analysiert. Die Ergebnisse zeigten, dass die fünf unabhängigen Variablen (Mathematikselbstwirksamkeit, Mathematikselbstkonzept, Mathematikangst, intrinsische Motivation in der Mathematik und extrinsische Motivation in der Mathematik) gemeinsam einen Mehrfachregressionskoeffizienten von 0,846 und ein Mehrfachkorrelationsquadrat von 0,715 beisteuerten zur Vorhersage des Leistungsniveaus von Oberstufenschülern in Mathematik. Implizit entfielen 71,5% der Gesamtvarianz der abhängigen Variablen (Mathematikleistung) auf die Kombination der fünf unabhängigen Variablen. Auf der Grundlage dieser Studie wurde daher vorgeschlagen, geeignete Interventionsstrategien zur Verbesserung der Mathematikselbstwirksamkeit, des Mathematikselbstkonzepts, der Mathematikleistung und der Motivation zum Erlernen von Mathematik in nigerianischen weiterführenden Schulen umzusetzen, um deren Angst vor Mathematik zu mindern.

1. Introduction

Students' behaviour in the face of difficulty is a function of the way they think and feel about themselves. Successful educational systems arm students with the capacity to impact their own lives and be outstanding. To be outstanding is to be educationally numerate and mathematics equips students with this quality. Mathematics self-beliefs have an effect on students' learning, cognition, motivation, affect and decision-making (OECD, 2013). Mathematics self-beliefs govern students' motivation and perseverance in the face of challenges, impact students' emotional life, and influence the choices students make in the area of course work, class attendance, and educational pathways and career selections (Bandura, 1997; Wigfield & Eccles, 2000). In this study, mathematics self-beliefs are taken to mean mathematics self-efficacy, mathematics self-concept, mathematics anxiety, and student engagement in mathematics activities at and outside school. It is evident that even though these self-beliefs are conceptually distinct they are related (Lee, 2009; Lent, Lopez & Bieschke, 1991; Pajares & Kranzler, 1995; Pajares & Miller, 1994).

Self-efficacy has been defined as an individual's judgment of their capability to organize and execute the courses of action required to attain designated types of performances (Bandura, 1986, 1997). Social Cognitive theorists have demonstrated that self-efficacy influences human motivation, persistence, efforts, action, behaviour, achievement and the degree of anxiety people experience (Bandura, 2000; Zimmerman, Bandura, & Martinez-Pons, 1992) and higher self-efficacy is predictive of higher performance (Bong & Skaalvik, 2003; Martin & Marsh, 2006; Skaalvik & Skaalvik, 2004; Stevens, Olivárez & Hamman, 2006). In general, self-efficacy expectations "are task and domain specific" (Pajares & Miller, 1995, p.190). While self-efficacy has been applied to various academic areas, mathematics has been a subject of interest (Hackett, 1985; Hackett & Betz, 1989; Pajares & Miller, 1994, 1995).

Mathematics self-efficacy is the extent to which students believe in their own ability to handle mathematical tasks effectively and overcome difficulties (OECD, 2013). Better performance in mathematics is an indicator of higher levels of self-efficacy while students who show low levels of mathematics self-efficacy are at a high risk of poor performance in mathematics, regardless of their abilities (Bandura, 1997; Schunk & Pajares, 2009). Students who exhibit low levels of self-efficacy are least expected to control their achievement behaviours or be inspired to engross in learning activities (Klassen & Usher, 2010; Schunk & Pajares, 2009). Mathematics self-efficacy is positively related to mathematics performance (Liu & Koirala, 2009; Pajares & Miller, 1994) and future mathematics achievement (Parker, Marsh, Ciarrochi, Marshall, & Abduljabbar, 2014). Perceived self-efficacy in mathematics has been found to be more predictive of students' choices of mathematically related courses in programmes of further study than prior attainment or outcome expectations (Hackett & Betz 1989; Pajares & Miller 1994). While Anjum (2006) found that mathematics self-efficacy was a significant predictor of mathematics performance, Dennis, Daly and Provost (2003) found a direct association between self-efficacy beliefs and mathematics anxiety.

In general students often worry about their performance in school settings and are anxious when they have to take examinations. This feeling of anxiousness becomes more intense for many students when asked to solve a mathematics problem. This undesirable and perturbing element in mathematics classroom (Awofala & Awolola, 2011) is called mathematics anxiety. Students who exhibit high levels of mathematics anxiety naturally report feeling tense, apprehensive and fearful of mathematics (Ma, 1999; Richardson & Suinn, 1972; Tobias, 1993; Zeidner & Mathews, 2011) and they tend to underachieve in mathematics tasks compared to students with no or low levels of mathematics anxiety (Hembree, 1990; Ma, 1999). Awofala and Odogwu (2017) described mathematics anxiety as a performance based anxiety disorder that involves physiological stimulation, negative cognitions, and avoidance behaviours that lead to an affective drop in mathematics and mathematics related activities. Mathematics anxiety like test anxiety has been found to be bi-dimensional in nature (Wigfield & Meece, 1988). Ho et al. (2000) used structural equation modelling to provide evidence for the differential predictive validity of two dimensions of mathematics anxiety, namely a negative affective reactions (emotionality) component and a cognitive (worry) component. The affective component of mathematics anxiety related more strongly and negatively than did the worry component to children's ability perceptions, performance perceptions, and mathematics performance (Wigfield & Meece, 1988). The worry component related more strongly and positively than did the affective component to the importance that children attach to mathematics and their reported actual effort in mathematics (Wigfield & Meece, 1988).

Since its inception into the psychological literature and up till the present moment, mathematics anxiety has been found to be consistently and negatively related to mathematics performance and achievement (Awofala & Odogwu, 2017; Awofala & Awolola, 2011; Engelhard, 1990; Green, 1990; Hembree, 1990; Ho, Senturk, Lam, Zimmer, Hong & Okamoto, 2000; Richardson & Suinn, 1972; Sarason, 1986; Wigfield & Meece, 1988) in which students that exhibit higher levels of mathematics anxiety tend to have lower levels of performance and achievement in mathematics (Artemenko, Daroczy, & Nuerk 2015; Ashcraft & Kirk, 2001; Ashcraft & Krause, 2007; Beall, Roebuck, & Penkalsky, 2015). However, a moderate level of mathematics anxiety can facilitate students' mathematics thinking and motivate them in learning (Cassady & Johnson, 2002) and when students are motivated to learn, it may increase their anxiety as they have high expectations and thoughts of the consequences of not meeting the expectations (Cassady & Johnson, 2002).

Motivation and engagement can be regarded as the catalysts for learning. Motivation is the driving force behind our actions and affects our needs, desires and life ambition (Rabideau, 2005). Two major types of motivation to learn mathematics have been distinguished in the literature and these are intrinsic and extrinsic motivation. These two constructs are significant in self-determination theory (Ryan & Deci, 2009) and expectancy-value theory (Wigfield, Tonks & Klauda, 2009). Intrinsic motivation refers to an innate inclination of the individual to examine and master his internal and external environment. Intrinsic motivation refers to the drive to perform an activity purely for the joy gained from the activity itself (OECD, 2013). Students are intrinsically motivated to learn mathematics because of the inherent joy, interest and pleasure they derive from it and not because of any external reward they will get upon their mastery of mathematical concepts and solving mathematics problems. Intrinsic motivation influences the extent of student engagement, the learning activities in which students enrol, student performance, and the types of careers students aspire to and choose to pursue (Reeve, 2012). Students with high levels of intrinsic motivation develop goals to learn and goals to achieve and exhibit much persistence and effort on any task.

Extrinsic motivation refers to behaviours motivated by the desire to achieve external rewards or social demands. Extrinsic motivation to learn mathematics refers to the drive to learn mathematics because students perceive it as useful to them and to their future studies and careers (Eccles & Wigfield, 2002; Miller & Brickman, 2004). Extrinsic motivators include parental expectations, expectations of other trusted role models, and the potential increase in earnings from taking courses and good grades (Chow & Yong, 2013). Extrinsic motivation promotes effort and performance with rewards serving as positive reinforcers for the desired behaviour (Benabou & Tirole, 2003). Extrinsic motivation naturally yields immediate results and needs less effort in comparison to intrinsic motivation (Ryan & Deci, 2000). While lack of true independent learning is one of the downsides of extrinsic motivators, students with higher levels of extrinsic motivation do not work over the long term (Chow & Yong, 2013) because once the rewards are removed, students lose their motivation (DeLong & Winter, 2002). In a study that investigated students' motivation and achievement in combined science using a sample of 324 students in Brunei Darusasalam, Chow and Yong (2013) found significant positive associations between students' motivational orientations (e.g. intrinsic, extrinsic, etc) and science achievement. Areepattamannil (2014) studied the intrinsic and extrinsic motivation-mathematics attitude relationship in a sample comprising 363 Indian adolescents and 355 Indian immigrants living in Canada. The results revealed that both motivation types and motivation in general were not statistically and significantly associated with mathematics achievement among Indian adolescents but contrarily results showed that both motivation types and motivation were statistically and significantly associated to mathematics achievement among the immigrants.

One self-belief construct that is related to self-efficacy is self-concept. Self-concept is a multidimensional construct that refers to a person's perception of self in terms of both academic and non-academic aspects (Bong & Clark, 1999; Byrne & Worth Gavin, 1996). Self-concept can be divided into two distinct factors; academic and non-academic self-concepts (Marsh, 1990; Marsh & Shavelson, 1985). Academic self-concept refers to individuals' knowledge and perceptions about themselves in academic achievement situations (Wigfield & Karpathian, 1991) whereas non-academic self-concept is about perception of oneself in non-academic activities which includes their physical self and their relations with parents, friends, and community.

In relation to mathematics, self-concept is students' beliefs in their own mathematics abilities (OECD, 2013). A person's mathematical self-concept refers to the perception or belief in his or her ability to do well in mathematics or confidence in learning mathematics. Positive mathematics self-concept is an important outcome of education (Branden, 1994) and is strongly related to successful learning (Marsh, 1986; Marsh & O'Mara, 2008). Longitudinal studies of self-concept and achievement show that they are reciprocally related over time (Marsh & Martin, 2011; Marsh, Xu & Martin, 2012). While better student achievement leads to enhancement of self-concept, positive self-concept can help in the growth of student achievement concurrently (Byrne & Shavelson, 1986; Craven, Marsh, & Burnett, 2003). Self-concept can also affect well-being and personality development (OECD, 2013). Using data from different countries, Wilkins (2004) conducted an international investigation of the relationship between mean country mathematics and science self-concept and respective mean country achievement and geographic region. Findings showed, at the student level, an overall positive

relationship between achievement and self-concept in the countries investigated. However, at the country level, a negative relationship was found between achievement and self-concept. In two separate international studies using data from the Third International Mathematics and Science Study (TIMSS), Wilkins, Zembylas, and Travers (2002) found a positive relationship between self-concept and mathematics and science achievement for 16 countries whereas Kifer (2002) found a negative relationship between self-concept and achievement, noting that students in many of the highest performing countries in terms of achievement had some of the lowest overall beliefs in their ability to perform.

Based on this review it was thus revealed that few researchers have examined simultaneously any combination of measures of mathematics anxiety, mathematics self-efficacy, mathematics self-concept, and motivation to learn mathematics of senior secondary school students in relation to mathematics achievement. Hence, this study investigated mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics as correlates of mathematics achievement.

2. Research Questions

Specifically, in this study, the following research questions were addressed:

RQ1. Are there any relationship between mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, extrinsic motivation in mathematics, and mathematics achievement among senior secondary school students?

RQ2. What is the composite contribution of these factors (mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics) to the explanation of the variance in the senior secondary school students' mathematics achievement?

RQ3. What is the relative contribution of each of these factors (mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics) to the explanation of the variance in the senior secondary school students' mathematics achievement?

3. Methods

The study made use of a quantitative research method within the blueprint of the descriptive survey design of an ex-post facto type. This is because the existing status of the independent variables were only determined during data collection without any manipulation of the variables by the researcher. The target population for the study comprised public senior secondary school year mathematics students in education District II and IV of Lagos State, Nigeria. A multistage sampling technique was used. First, simple random sampling was used to select educational Districts II and IV out of the six educational districts in Lagos State. Second, purposive sampling was used to select schools to participate based on three (3) conditions: (a) schools that have qualified mathematics teachers (i.e. graduates) who have been consistent (i.e. employed from one year to the other) with the school for at least three years, (b) schools that have been presenting candidate in public examinations such as the Senior School Certificate Examinations (SSCE) and National Examinations Council (NECO) for mathematics, and (c) schools should be public and coeducational. Based on the aforementioned criteria, 12 schools in education District II and 10 schools in education District IV met the criteria. Thereafter, all the 22 schools were used for the study and each of the schools has three classes for mathematics, which were used for the study. A total of 2500 students consisting 1201 males and 1299 females Senior Secondary year two mathematics students were involved in the study in which 60% were Christians and 40% Muslims. Their age ranged between 16 and 21 years with a mean age of 18 years 2 months and standard deviation of 2 years 4 months.

For the purpose of data collection, six instruments were used in which five were adopted (MSES-mathematics self-efficacy scale, MSCS-mathematics self-concept scale, EMMS-extrinsic motivation in mathematics scale, IMMS-intrinsic motivation in mathematics scale, and MAS-mathematics anxiety scale) from OECD (2013) and one (MAT-mathematics achievement test) was developed for the study. The reliability estimate for each adopted instrument was calculated using a sample group of 200 students from one senior secondary school not part of the study schools in education District II of Lagos State, Nigeria. Henson (2001) identified a Cronbach's coefficient of [0.80] or higher as indicating adequate internal consistency

reliability. All instruments used in the study met this minimum requirement.

The MAT as an assessment consisted of two sections, A and B. Section A asked for personal information on the students with respect to gender, age, and name of school. Section B contained 30 multiple choice objective test items. The response choices to each item consisted of one key and three distracters. The test content covered the course content of number and numeration, algebraic processes, trigonometry, probability and statistics, and calculus in the three levels of cognitive domain of Remembering (knowledge), Understanding (comprehension & application), and Thinking (analysis, synthesis, & evaluation) (Okpala, Onocha & Oyedeji, 1993). The items specification is shown in table no. 1.

Table no. 1. Mathematics Achievement Test (MAT) Item Specification

Content	Cognitive Levels			Total
	Remembering	Understanding	Thinking	
Number and numeration	2	1	3	6
Algebraic processes	5	-	2	7
Trigonometry	6	1	-	7
Probability and statistics	1	1	2	4
Calculus	4	2	-	6
Total	18	5	7	30

Table no. 1 illustrates how the research instrument covered a representative sample of the content. In addition, the initial draft of the MAT, composed of 40 multiple-choice objective test items, was face validated by two mathematics lecturers at a University in Ogun State, Nigeria using a checklist consisting of the following: (a) language clarity to target population (b) content coverage (c) relevance of draft items to stated objectives. The items were scaled down to 35 based on the experts' recommendation. The face validated 35-items multiple objective test was administered to 200 students from one senior secondary school not part of the study schools in education District II of Lagos State, Nigeria for 45 minutes. Both the discriminating power and difficulty index for each item were calculated. Items of discrimination power of more than 0.40 and difficulty index of 0.40-0.60 were retained (Akinsola & Awofala, 2009). Five of the items were eventually dropped leaving the final set of 30 questions for the instrument. Using the Kuder-Richardson's formula 20, the reliability was estimated as 0.89.

The MSES is an 8-item questionnaire adopted from OECD (2013) that measures students' self-efficacy beliefs. These items, which were positively posed used a modified five-point Likert response scale: Not At All Confident-0, Not Very Confident-1, Confident-2, More confident-3, Most Confident-4. The reliability value for MSES as a whole was 0.92 and this showed adequate internal consistency reliability. Sample items on the MSES include: 1. "Using a train timetable to work out how long it would take to get from one place to another";

2. "Calculating how much cheaper a TV would be after a 30% discount".

The MSCS is a 5-item questionnaire adopted from OECD (2013) that measures students' self-concept in mathematics. These items, which were positively posed used a modified five-point Likert response scale: 0- undecided, 1- strongly disagree, 2- disagree, 3- agree, and 4- strongly agree. The reliability value for MSCS as a whole was 0.96 and this showed adequate internal consistency reliability. Sample items on the MSCS include: 1. "I have always believed that mathematics is one of my best subjects"; 2. "In my mathematics class, I understand even the most difficult work".

The MAS is a 5-item questionnaire adopted from OECD (2013) that measures students' anxiety in mathematics. These items, which were negatively posed used a modified five-point Likert response scale: 0- undecided, 4- strongly disagree, 3- disagree, 2- agree, and 1- strongly agree. The reliability value for MAS as a whole was 0.97 and this showed adequate internal consistency reliability. Sample items on the MAS include: 1. "I often worry that it will be difficult for me in mathematics classes"; 2. "I get very tense when I have to do mathematics homework".

The IMMS is a 4-item questionnaire adopted from OECD (2013) that measures students' intrinsic motivation in mathematics. These items, which were positively posed used a modified five-point Likert response scale: 0- undecided, 1- strongly disagree, 2- disagree, 3- agree, and 4- strongly agree. The reliability

value for IMMS as a whole was 0.90 and this showed adequate internal consistency reliability. Sample items on the IMMS include: 1. "I do mathematics because I enjoy it"; 2. "I am interested in the things I learn in mathematics".

The EMMS is a 4-item questionnaire adopted from OECD (2013) that measures students' self-concept in mathematics. These items, which were positively posed used a modified five-point Likert response scale: 0-undecided, 1- strongly disagree, 2- disagree, 3- agree, and 4- strongly agree. The reliability value for EMMS as a whole was 0.92 and this showed adequate internal consistency reliability. Sample items on the EMMS include: 1. "Making an effort in mathematics is worth it because it will help me in the work that I want to do later on"; 2. "Mathematics is an important subject for me because I need it for what I want to study later on".

The researcher together with ten research assistants personally administered the six research instruments (MSES, MSCS, EMMS, IMMS, MAS and MAT) in that order to the sample in regularly scheduled class period of 80 minutes. The participants were told that their participation was voluntary and that their responses would be treated with utmost confidentiality. Data collected were analysed with mean, standard deviation,

Pearson's product moment correlation, analysis of variance (ANOVA) and multiple regression analysis at 0.05 level of significance.

4. Results

4.1. Research Question One: Are there any relationships among mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, extrinsic motivation in mathematics, and mathematics achievement among senior secondary school students?

The results in table no. 2 below showed the relationships among the mathematics self-efficacy, mathematics self-concept, mathematics anxiety, extrinsic motivation in mathematics, intrinsic motivation in mathematics and mathematics achievement. There was a significant positive correlation between math achievement and all of the predictor variables with the exception of mathematics anxiety which was negatively correlated with mathematics achievement. In turn, mathematics anxiety had a negative correlation with all of the other predictor variables, which in turn are all positively correlated with each other. More so, all of the correlations are statistically significant at a 0.01 significance level.

Table no. 2. Correlations matrix for the relationship between mathematics self-efficacy, mathematics self-concept, mathematics anxiety, extrinsic motivation in mathematics, intrinsic motivation in mathematics and senior secondary school students' mathematics achievement

	1	2	3	4	5	6
1. Mathematics achievement	1					
2. Mathematics self-efficacy	.84**	1				
3. Mathematics self-concept	.41**	.38**	1			
4. Mathematics anxiety	-.67**	-.85**	-.33**	1		
5. Intrinsic motivation in mathematics	.18**	.13**	.14**	-.13**	1	
6. Extrinsic motivation in mathematics	.32**	.29**	.23**	-.16**	.43**	1
Mean	18.12	10.51	9.57	16.77	10.66	12.86
SD	3.01	2.06	2.01	3.02	2.13	2.68
N	2500	2500	2500	2500	2500	2500

**Significance at $p<.01$

4.2. Research Question Two: What is the composite contribution of these factors (mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics) to the explanation of the variance in the senior secondary school students' mathematics achievement?

The results for a multiple regression model where all five of the predictor variables were entered into the model

are presented in table no. 3. The results in table no. 3 below showed that the independent variables (mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics) jointly contributed a coefficient of multiple regression of .846 and a squared multiple correlation of .715 to the prediction of senior secondary school students' mathematics achievement. By implication, 71.5% of the total variance of the dependent variable (mathematics behaviours) was accounted for by the combination of the

five independent variables. The results further revealed that the analysis of variance of the multiple regression model produced an *F*-ratio value significant at 0.001 level ($F_{(5, 2494)}$ = 1251.12; *p*<.001). The results of the relative contributions of the independent variables to the prediction of senior secondary school students' mathematics achievement was that self-efficacy in mathematics accounted for the largest amount of unique variance in senior secondary school students' mathematics achievement (β = .87, *t* = 40.88, *p*<.001), while mathematics self-concept made the next largest

contribution to the prediction of the dependent variable (β =.10, *t* = 8.20, *p*<.001). Mathematics anxiety (β = -.11, *t* = -5.19, *p*<.001) made the next negative contribution to the prediction of mathematics achievement. Intrinsic motivation in mathematics made the next positive contribution (β =.06, *t* = 4.73, *p*<.001) to the prediction of dependent measure. Extrinsic motivation in mathematics (β =.03, *t* = 2.40, *p*=.016) accounted for the least amount of unique variance in prediction of the dependent measure.

Table no. 3. Model summary, coefficient and t-value of multiple regression analysis of mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics extrinsic motivation in mathematics and the outcome measure (mathematics achievement)

Model summary
Multiple R =.846
Multiple R^2 =.715
Multiple R^2 (adjusted) =.714
Standard error estimate =4.94
$F_{(5, 2494)}$=1251.12, p<.001

Model	Unstandardised coefficient		Standardised Coeff	t	Sig	Unique Variance Estimate
	B	Std Error	Beta			
Constant	3.27	.49		6.63	.000	
MSE	1.10	.03	.87	40.88	.000	.26573
MSC	.31	.04	.10	8.20	.000	.01118
MAS	-.12	.02	-.11	-5.19	.000	.00419
IMM	.13	.03	.06	4.73	.000	.00419
EMM	.08	.03	.03	2.40	.016	.00139

MSE=mathematics self-efficacy; MSC=mathematics self-concept; MAS=mathematics anxiety; IMM=intrinsic motivation in mathematics; EMM=extrinsic motivation in mathematics.

4.3. Research Question Three: What is the relative contribution of each of these factors (mathematics self-efficacy, mathematics self-concept, mathematics anxiety, intrinsic motivation in mathematics, and extrinsic motivation in mathematics) to the explanation of the variance in the senior secondary school students' mathematics achievement?

In order to determine the relative contribution of each of the predictor variables, the authors created a set of five reduced models where each reduced model excludes one of the five predictor variables. Thereafter, we computed the change in the squared multiple correlation between the full model with all five predictors and each of the 4-predictor reduced models. This change in the squared multiple correlation represents the unique variance in the dependent variable accounted for by the omitted predictor that is independent of the variance accounted for by the other four predictors. This unique variance is a better quantitative estimate of the importance of each predictor in predicting the dependent variable. Table 3 showed the unique variance estimate of each predictor variable. Self-efficacy in mathematics accounted for the largest amount

of unique variance (26.57%) in senior secondary school students' mathematics achievement. This was followed by self-concept in mathematics which accounted for 1.19% of unique variance in the dependent measure. This was followed by mathematics anxiety and intrinsic motivation which accounted for 0.42% each of unique variance in the dependent measure. Extrinsic motivation in mathematics accounted for the least unique variance of 0.14% in senior secondary school students' mathematics achievement.

5. Discussions

The results displayed in table no. 3 showed that 71.5% of the variance in senior secondary school students' mathematics achievement was accounted for by the five predictor variables (mathematics self-efficacy, mathematics self-concept, mathematics anxiety, extrinsic motivation in mathematics, and intrinsic motivation in mathematics) taken together. Thus, the predictor variables investigated when taken together predicted to some extent mathematics achievement among senior secondary school students involved in the study. The strength of the

predictive power of the combined independent variables on the outcome variable was strong and significant to show the linear relationship between the five predictor variables and the total variance in senior secondary school students' mathematics achievement. These results are consistent with previous findings (Awofala & Odogwu, 2017; Stankov, Lee, Luo, & Hogan, 2012) in which the relation between mathematics anxiety and mathematics achievement is bidirectional (Carey, Hill, Devine, & Szucs, 2016); mathematics self-concept more strongly relates to mathematics achievement than academic self-concept (McWilliams, Nier, & Singer, 2013) and mathematics self-concept accounted for a significant unique proportion of variance in mathematics achievement (Timmerman, Toll, & Van Luit, 2017); and that intrinsic and extrinsic motivation play a mediating role in the correlation between academic self-concept and academic achievement in 16 to 19-year-old adolescents (Areepattamannil, 2012).

On the relative contribution of each of the independent variables to the explanation of variance in senior secondary school students' mathematics achievement, the present study revealed that all the five independent variables made statistically significant contribution to the variance in senior secondary school students' mathematics achievement. Mathematics self-efficacy, was the best predictor of mathematics achievement and accounted for 26.57% of the variance in senior secondary school students' mathematics achievement. This was followed by mathematics self-concept which alone accounted for 1.19% of the variance in senior secondary school students' mathematics achievement. This was followed by mathematics anxiety and intrinsic motivation in which each accounted for 0.42% of the variance in senior secondary school students' mathematics achievement. Extrinsic motivation in mathematics was the least predictor which alone accounted for 0.14% of the variance in senior secondary school students' mathematics achievement.

6. Conclusions

This study has revealed that mathematics self-efficacy, mathematics self-concept, mathematics anxiety, and motivation to learn mathematics are robust predictors of senior secondary school students' achievement in mathematics. Since mathematics self-efficacy,

mathematics self-concept, mathematics anxiety, and motivation to learn mathematics affect mathematics achievement, a drop in self-efficacy, self-concept and motivation to learn mathematics can produce a less satisfactory effect on students' achievement and increase their mathematics anxiety. Therefore, mathematics anxiety needs attention in the mathematics classroom, most especially because mathematics anxiety develops during the primary school years. Appropriate intervention strategies that could improve students' mathematics self-efficacy, mathematics self-concept, mathematics achievement, and motivation to learn mathematics but lessen their mathematics anxiety should be implemented in Nigerian senior secondary schools. More so, future studies should investigate if interventions designed to change the beliefs and affective responses of students to mathematics can change those beliefs and affective responses, and if changes occur, would there be corresponding changes in mathematics achievement. In addition, future studies in Nigeria should in addition to the variables identified in the present study consider such contextual variables as socio-economic status (SES) and educational opportunity in which a multi-level analysis could be performed to account for school differences.

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An analysis of the students' needs and the relation between them, the level of satisfaction and the academic results

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An analysis of the students' needs and the relation between them, the level of satisfaction and the academic results

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Abstract

Keywords:
academic needs; satisfaction; supportive bonding; student centering; feedback.

The present study has focused on identifying the needs and the level of satisfaction of the students enrolled in the *Psycho-pedagogical training program in view of certifying the teaching competencies*, organized by the Teacher Training Department, University of Craiova.

The survey focused on the following criteria of satisfaction: the actuality and importance of the concepts taught, their explanation and understanding; the usefulness of the theory taught, its implementation; the teaching methods used; the existence of information resources; the attitude of the teachers; the quality of the activities carried out within the pedagogical practice; the assessment and grading, the extracurricular opportunities offered by the study program.

The methods used for data collection were the questionnaire-based survey and the focus-group interview, while the statistical-mathematical processing required the use of the synthetic result tables and the certainty of the correlation. The graphical representation of the results was specially made through histograms and areolar diagrams.

The data collected and analyzed led to the following observation: the attitude of the teachers towards the students is the dimension with the greatest impact on the adaptation of the student to the university environment and on the level of satisfaction regarding his/ her academic experience. On the other hand, the students' level of satisfaction with regard to the university studies represents an important psycho-pedagogical determinant of the involvement and the academic success.

Zusammenfasung

Schlüsselworte:
akademischeBedürfnisse; Zufriedenheit, Unterstützung, Studentenfokus; konstruktives Feedback.

Als die Universitätenzielen die ständigeVerbesserungderenDienstleistungen, konzentriertenwirunserInteresse auf die Identifizierung der Studentenbedürfnisse, zurGestaltungeinerZufriedenheitserhöhung in der akademischen Welt und akademischenVorbereitung.

DieseArbeitzentriertsich auf die Identifizierung der Bedürfnisse und Zufriedenheitsgrad der in dem*PsychopädagogischenBildungsprogramzurZertifizierung der Kompetenzenfür Lehrer,* das von der *AbteilungfürBildung des Lehrpersonals*in der Universität von Craiova organisiertwurde.

Die BefragungzieltefolgendeZufriedenheitskriterien: Zeitgemäßheit und Bedeutung der geliefertenBegriffe, derenErläuterung und Verständniss; Nützlichkeit der geliefertenTheorie, seine Umsetzung; verwendeteLehrmethoden; das Bestehen der informationellenRessourcen; Verhalten der Lehrer; Qualität der in Rahmen der pädagogischenVorbereitungszeitdurchgeführtenTätigkeiten; Beurteilung und Bewertung; außerschulischeMöglichkeiten des Studienprogramms.

Die zurDatengewinnungangewendetenDatenberuhensich auf Befragungen und Focus-Grup Interview, wobei die statistische-matematischeVerarbeitung die Verwendung der syntetischenErgebnistabelle und Bestimmung der Zielabstimmungbedarf. Die graphischeDarstellung der ErgebnisseumfassteFlächen-Blockdiagramme.

Die gesammelten und geprüftenDatenführtenzurfolgendenBestimmung: das Verhalten der Lehrer gegenüber den Studenten hat die stärksteWirkung auf die Anpassung des Studentenzu der akademischen Umwelt und Zufriedenheitsgrad seiner akademischenErfahrung. Andererseits, das Zufriedenheitsgrad der Studenten in Bezug auf die akademischenStudienisteinenwichtigenFaktorderenEinwicklung und Erfolg.

1. Introduction

Although the major concern of the University is oriented towards the didactic dimension of the educational system, appreciated by having the students evaluate teachers through questionnaires, by having the teachers fill in self-assessment grids, by periodic characterizations made at the level of the faculties/ departments, we consider a scan of the opinion of the main partners in the training-educational process – the students - to be useful.

Certain research data (Eom, Wen & Ashill, 2006) reveal that student satisfaction is a significant predictor of the learning results.

The students' level of satisfaction is directly proportional to their needs. As such, knowing the needs of the students can be an important step in stimulating motivation, in increasing their cognitive interest and their academic achievement.

Ensuring satisfaction with the educational services is important because research shows that student satisfaction is the factor that has the greatest influence on their loyalty (Helgesen, Nesset, 2007), influencing the increasing involvement of the students in the educational process. Student engagement, which is the time and effort dedicated to academic activities, is another predictor of ensuring success (Kuh, 2009; Wolf-Wendel, Ward & Kinzie, 2009).

In addition, studies show that a low level of satisfaction leads to a reduction in the academic performance of the students and leads to abandoning studies (Aldridge, Rowley, 1998), respectively to expressing dissatisfaction online (Arif *et al*., 2013).

Our concern is focused on identifying the needs and expectations of the students, especially the future teachers, in order to meet their needs and find the most suitable strategies for activating and stimulating their commitment, on involving students in their own training, education.

2. Theoretical foundation

The transition from high school to university is often difficult, demanding for the students, both personally and academically; the emphasis will be placed on the self-management of learning, on taking notes independently, on individual study, whereas high school students do not have sufficiently developed skills, capacities, abilities in this regard.

Getting used to the specific of academic education, to a different program, to a different rhythm of teaching - learning and managing the volume of information, to the educational offer, implies a series of difficulties, reason why they need support in order to adapt, successfully

manage the situation, prevent failure or even abandoning it.

As such, we consider it necessary to know the needs of the students in order to make an objective diagnosis and to find the most suitable training strategies that will allow them to adapt to the academic environment and to obtain high results in exams.

There are, in the specialized literature, concerns about the inventory of the

students' needs. We are going to select and present 14 needs of any student (adapted after Heick, 2018):

a) self-knowledge;

b) models to relate to and models who are capable to inspire them, to mobilize them to take action;

c) learning strategies;

d) feedback, not judgment (feedback helps – it acts as a guide, it is corrective and it can even be comforting; judgment is personal and emotional and it hurts);

e) contexts and tools to use creatively in self-expression and self-direction;

f) ideas - sometimes all they need is an idea to start with;

g) the need to be heard;

h) the need for someone to believe in them, especially when their self-esteem is low;

i) the possibility to exercise, to put into practice what they have learned;

j) each student deserves as many chances as possible;

k) each student must "play", experiment - in collaboration with various partners, using various digital applications, following a series of models/ examples, using their own thinking;

l) each student needs self-efficacy, he/ she needs to develop his/ her skills, capacities that allow him/ her to complete, through his own forces, the things already started;

m) correct writing and reading skills - literacy is the basis of formal learning/ training;

n) the need for approval - authentic affection and acceptance is the foundation of the highest performances.

The 14 needs listed above are summarized in the figure below:

14 Things		
Every Student Needs		
• self-knowledge	• ideas	• to play
• inspiring models - and	• an audience	• self-efficacy

modelling • learning strategies • feedback, not judgment • creative spaces and tools	• a champion • a chance to practice • as many chances as it takes	• to read and write • approval that isn't always contingent on „success"

Figure no. 1. 14 Things Every Student Needs (Heick, 2018)

In terms of satisfaction, in the specialized literature this is defined as a feeling of happiness that is obtained when a person has fulfilled his/ her needs and desires (Saif, 2014), it is a condition felt by a person who has experienced a performance or a result that met its expectations (Ilyas, Arif, 2013).

Elliot and Shin (2002) define student satisfaction as a disposition determined by the subjective evaluation of the educational results and experience. In other words, satisfaction can be defined as a function of the relative level of experiences and perceived performance of the educational service (Mukhtar, Anwar, Ahmed, Baloch, 2015) during studying, as a short-term attitude resulting from evaluating the experience, services and educational facilities.

Therefore, satisfaction can be defined as an experience of achieving the expected results (Hon, 2002). A person will be satisfied when he/ she reaches his/ her expectations (Rad, Yarmohammadian, 2006). Satisfaction refers to the feeling of pleasure or disappointment that results from comparing perceived performance against expectations (Kotler, Keller, 2012).

Due to the complexity and particularities of education, the investigation of the academic satisfaction of the students is difficult; the revision of literature indicates an increase in the number of papers oriented on this topic. Studies focused on this topic capture various aspects when referring to the measurement of student satisfaction.

Among them we can enumerate:

• Satisfaction with the information, with the content of the courses - actuality, the language used (Arnerić *et al*., 2010; Abdullah, 2005; Arif *et al*., 2013; DeShields *et al*., 2005; Gruber *et al*., 2010; Langrosen *et al*., 2004; Munteanu *et al*., 2010; O'Driscoll, 2012; Popa *et al*., 2011; Telford, Masson, 2005; Wilkins, Balakrishnan, 2013);

• Satisfaction with the attitude of the teachers - availability, involvement, objective, correct approach/

treatment, focus on the needs of the students (Abdullah, 2005; Ardi *et al*., 2012; Helgesen, Nesset, 2007; Gruber *et al*., 2010; Elliot and Healy, 2001; Langrosen *et al*., 2004; O'Driscoll, 2012; Navarro *et al*., 2005; Sayeda *et al*., 2010);

• Satisfaction with the administrative staff - attitude, communication, waiting time, the quality of the information received (Casidy, 2013; Gruber *et al*., 2010 etc);

• Satisfaction with the relationship of the university with the business environment, with the training courses in companies (Arnerić et al, 2010; Langrosen *et al*., 2004; Sayeda *et al*., 2010);

• Satisfaction with the collegiate atmosphere, leisure activities/ modalities offered (Wilkins and Balakrishnan, 2013; Sojkin *et al*., 2012) etc.

The present study focuses on identifying the important aspects that influence the satisfaction level of the students in order to improve the perception regarding the quality of the academic environment, of the teaching process in general and of the psycho-pedagogical training, in particular.

3. Research methodology

The purpose of the research was to find the answers to the following questions: What are the needs of the students enrolled in the psycho-pedagogical module? Which aspect influences the most the level of academic satisfaction? To what extent does the level of student satisfaction influence the exam results?

The *research objectives* were:

- The inventory of the students' needs which influences the level of academic satisfaction;

- To grasp the relation between the degree of satisfaction and the academic results.

In accordance with the objectives mentioned above, we checked the following *hypotheses:*

a) The availability of teachers for communication and emotional support of the students is one of the main academic needs that significantly influence the level of academic satisfaction;

b) The success of the students in the exam significantly depends on their level of satisfaction.

In order to reach the objectives set, the methods of collecting data were the sociological survey based on questionnaire and the focus-group interview.

The sample of the present research was represented by the students of the Faculties of Letters and Law, years III and IV, enrolled in the *Psycho-pedagogical training program in view of certifying the teaching competencies*, organized by the Teacher Training Department, University of Craiova.

Data collection was performed at the premises of the faculties mentioned above, obtaining a total of 76 valid questionnaires. Before applying the questionnaire, we used the focus-group interview to identify the academic needs of the students. In the two interviews a total of 30 subjects from the specified faculties participated (16 subjects from the Faculty of Law and 14 subjects from the Faculty of Letters). We mention that the needs of the students were collected (written down) from the first year of academic education, respectively of psycho-pedagogical training. At that time, these were summary

and superficial, as the students, for the most part, were still not very well aware of their needs and expectations from the academic environment. That is why we asked the subjects in the sample, within the two focus groups, to reflect on the experience of the two years and to complete and restructure the list of needs. We mention that in addition to the cognitive maturity, the constructivist training methodology used, focused on the development of the reflexive-metacognitive capacities (Mogonea, Ştefan, 2014), on the development of self-management skills in academic learning (Ştefan, 2014; Frăsineanu 2012), on solving cognitive conflicts (Popescu, 2014), it allowed the students a clear awareness of the course, an understanding of their cognitive and actional evolution, the identification of the strengths and weaknesses of their own training).

The data obtained were useful in constructing the academic satisfaction questionnaire. Most items have closed answers, only one requires an open answer.

4. Results and discussions

In order to verify the first hypothesis of the research - *The availability of teachers to communicate with and emotionally support students is one of the main academic needs that significantly influence the level of academic satisfaction* - we started to identify the students' needs.

We are now going to present the main needs of the students, according to the importance given to them (table no. 1, figure no. 2):

Table no. 1. The main needs of the students

Student needs	Frequency	Percentage
The availability of the teachers to communicate, to advise, to clarify certain professional problems, to offer emotional support	59	77,63%
Adapting the teaching style to the rhythm and to the own learning possibilities of the students	50	65.78%
The use of methods that arouse interest, that are able to make them actively involve and cooperate with other colleagues	49	64,47%
The use of new technologies (e-mail, electronic course support, video projector)	46	60.52%
The usefulness of the taught concepts, the practical application of theory	37	48.68%
The quality of pedagogical practice activities: good organization; constructive feedback; encouragement, emotional support from mentors	34	44.73%
Evaluation and marking objectivity and correctness	33	43.42%
The actuality of the concepts taught, the explanation of	31	40.78%

the new concepts		
The feedback offered by the teacher in evaluation	30	39.47%
The existence of the information resources (coursebooks, workbooks, etc.)	30	39.47%
The possibility of involving students in sessions of scientific communications, debates, theater-forums, research projects, summer schools and so on.	28	36.84%
The possibility of contesting the evaluation and marking results	19	24.35%
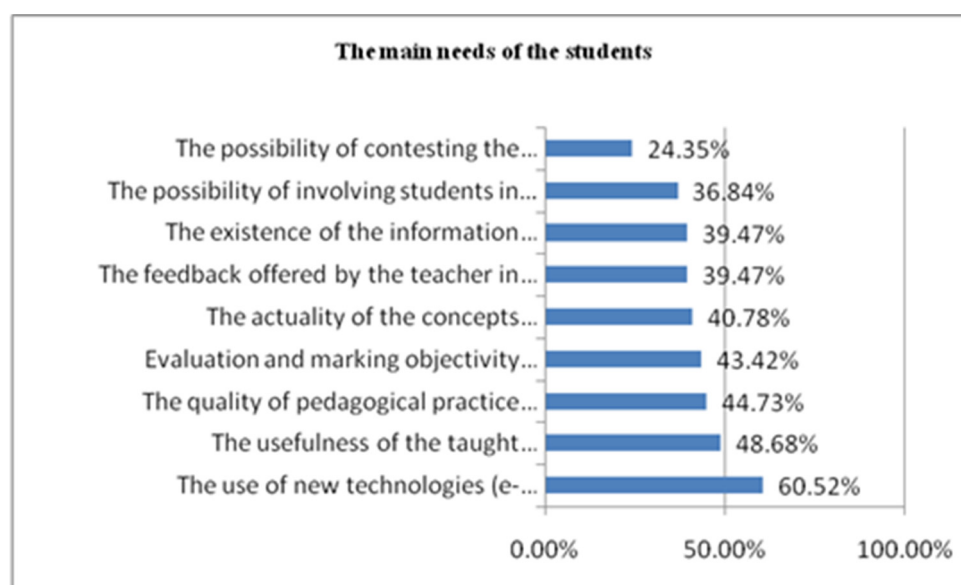
Figure no. 2. The main needs of the students

There can be observed that *the attitude of the teachers towards the students* is the need with the highest frequency, as indicated by the sample of subjects (77.63%).

The classification/ ordering of the needs outlined by the subjects in the interviews allowed us to formulate items about the degree of satisfaction of the subjects with regard to the factors considered to be relevant in relation to their own academic training. Starting from the answers of the subjects we identified 3 dimensions to which the outlined needs can be reported: a) the attitude of the teachers (it is observed that the students place this factor first); b) the didactic process; c) the pedagogical practice; d) the extracurricular opportunities offered in the study program.

As such, the measurement model built and applied in the process of data collection and processing is captured in table no. 2. The structure of each dimension (corresponding criteria) can also be observed in this table.

Table no. 2. The measurement model used in data collection and processing

Dimension	Criterion
	The content: the actuality and importance of the concepts taught, their explanation and understanding
The didactic process	The existence of information resources (coursebooks, workbooks, etc.)
	The usefulness of the theory taught, its implementation
	The active and interactive teaching methods used
	The objective assessment and marking; the feedback provided; the possibility of contesting the

	results
The attitude of the university teachers	Availability for communication
	Clarification of some professional problems
	Emotional support
	Advice
Teaching practice	Good organization
	Support in designing and developing the teaching activity
	Constructive feedback
	The mentors availability, encouragement, emotional support
Extracurricular opportunities	Sessions of scientific communications, debates, theater-forums, research projects, summer schools

The answers to the questions were assessed using a five-point Likert scale, 5 points being awarded to the "very satisfied"/ "total agreement" rating, and 1 point to the "not satisfied"/ "total disagreement" rating. no. 3 and the related graphs (figures no. 3, 4, 5, 6) highlight the results of processing the applied questionnaire.

Table no. 3. The results of processing the questionnaire by dimensions and criteria

Dimension	Criteria	Very satisfied 5	Satisfied 4	Relatively satisfied	A little satisfied	Not satisfied 1
The didactic process	Theoretical knowledge: the actuality and importance of the notions taught, their explanation and understanding;	24	23	15	11	3
		31.57%	30.26%	19.73%	14.47%	3.94%
	The existence of information resources (coursebook, workbook, etc.);	22	22	17	13	2
		28.94%	28.94%	22.36%	17.10%	2.63%
	The usefulness of the concepts taught, the practical application of the theory	11	11	19	23	12
		14.47%	14.47%	25%	30.26%	15.78%
	The (Inter) active teaching methods used	26	19	15	12	4
		34.21%	25%	19.73%	15.78%	5.26%
	The objective assessment and marking	12	12	26	13	13
		15.78%	15.78%	34.21%	17.10%	17.10%
The attitude of the university teachers	Availability for communication	18	17	21	14	6
		23.68%	22.36%	27.63%	18.42%	7.89%
	Clarification of some professional	23	22	17	11	3

	problems					
		30.26%	28.94%	22.36%	14.47%	3.94%
	Emotional support	15	12	28	13	8
		19.73%	15.78%	36.84%	17.10%	10.53%
	Advice	18	16	21	15	6
		23.68%	21.05%	27.63%	19.73%	7.89%
Teaching practice	Good organisation	21	20	17	13	5
		27.63%	26.31%	22.36%	17.10%	6.57%
	Support in designing and developing the teaching activity	16	16	25	12	7
		21.05%	21.05%	32.89%	15.78%	9.21%
	Constructive feedback	14	18	19	16	9
		18.42%	23.68%	25%	21.05%	11.84%
	The availability of the mentors, encouragement, emotional support	13	10	27	13	13
		17.10%	13.15%	35.52%	17.10%	17.10%
Extracurricular Oportunities	Sessions of scientific communications, debates, theater-forums, research projects, summer schools	21	24	14	11	6
		27.63%	31.57%	18.42%	14.47%	7.89%
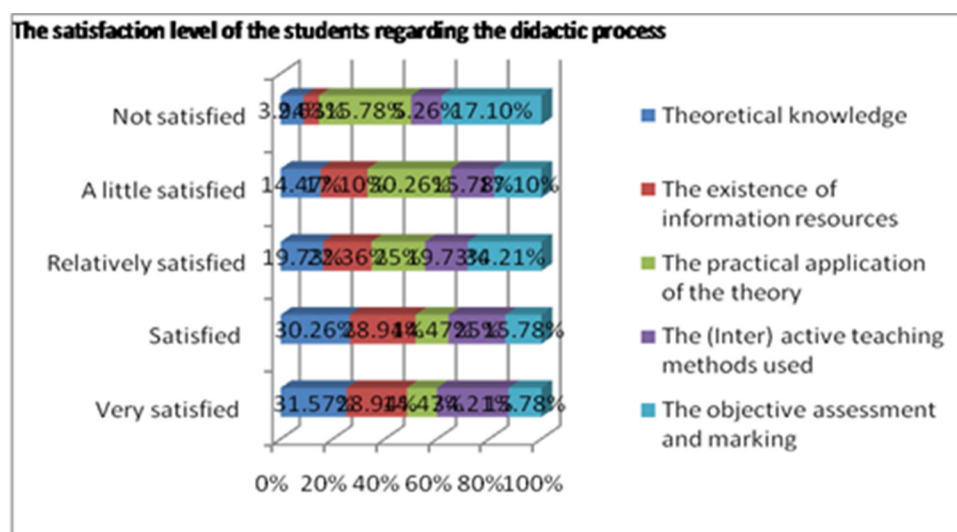
Figure no. 3. The satisfaction level of the students regarding the didactic process
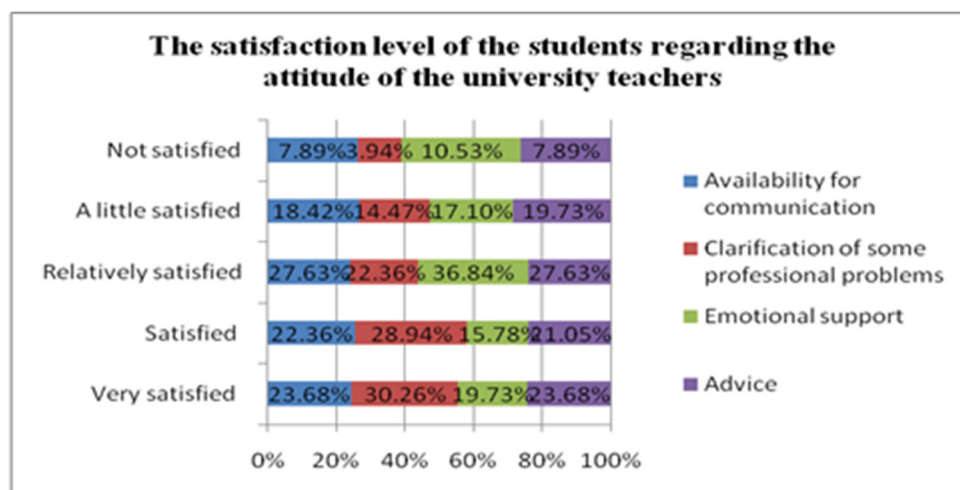
Figure no. 4. The satisfaction level of the students regarding the attitude of the university teachers
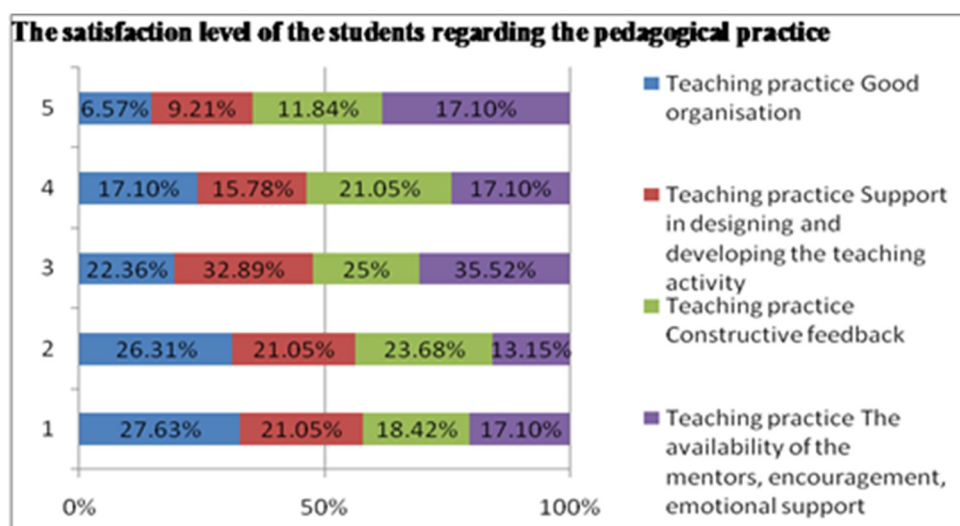
Figure no. 5. The satisfaction level of the students regarding the pedagogical practice

Analysing the answers to the questions it appears that, regarding the degree of student satisfaction, they declare themselves, for the most part, *satisfied and very satisfied* with:

- the theoretical knowledge acquired (61.83%);
- the existence of information resources (57.88%);

- the methods used by the teachers (59.21%);
- the university teachers' availability to communicate and clarify some professional problems (46.04%);
- the extracurricular opportunities offered (59.20%)

Figure no. 6. The satisfaction level of the students regarding the extracurricular opportunities

The aspects which the students are, for the most part, relatively satisfied with:

- objective assessment and rating (34.21%);
- emotional support offered by university teachers (36.84%).

Students generally appreciate the quality of the didactic and practical activities, the attitude of the teachers, the learning resources offered by the Psycho-pedagogical Training Program.

From the analysis of the answers to the questions it results that the students are *too little satisfied or not at all satisfied* and would like to improve the following aspects:

- the attitude of the teacher training mentors, which is a better communication, but also emotional support, encouragement and confidence invested in the student; students need supportive, encouraging, stimulating feedback, meant to determine them to mobilize their energy resources for learning, they need teachers to offer advice (34.20%); constructive feedback also needs to improve. Students, in proportion of 32.89% are not satisfied with this aspect;

- a greater practical applicability of the pedagogical theory in the didactic activities (46.04%); the students want their pedagogical practice to take place from the first year, in parallel with the theory taught in the other psycho-pedagogical disciplines, in order to have the possibility "to apply the assimilated notions to class and thus to fix them"; until the third year, when the pedagogical practice is carried out, the students argue that the theoretical notions of the first two years are already forgotten.

To the question "What is the dimension that most influences your degree of satisfaction with the academic experience? the recorded answers were the following (table 4 and figure 7):

Table no. 4. The dimension that most influences the degree of academic satisfaction

Dimension	Frequency	Procentage
The attitude of the university teachers	28	36.84%
The unfolded course and seminar activities	21	27.63%
The activities carried out during the internship of pedagogical practice	15	19.73%
Extracurricular opportunities offered by the study program	7	9.21%
The attitude of the administrative or auxiliary staff (secretaries): communication, waiting time, the quality of the information received	3	3.94%
The bureaucratic procedures related to the study papers	2	2.63%
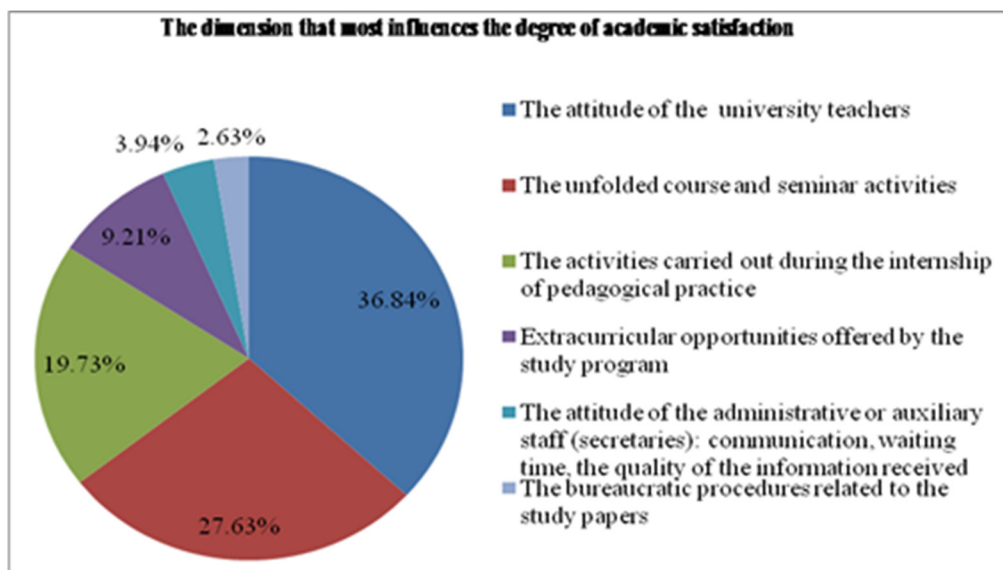
Figure no. 7. The dimension that most influences the degree of academic satisfaction

It is clear from the obtained answers that the dimension that most influences the degree of student satisfaction with the academic experience is *the attitude of the teachers towards the students* (36.84%), more than *the course and seminar activities* (27.63%), more than *the activities carried out during the internship of pedagogical practice* (19.73%).

Not only did the students place first, as an academic need, *the availability of the teachers for communication, advice, emotional support*, but they were aware of and affirmed that *the attitude of the teachers* greatly influences their image about the academic experience. Given this result, we can say that the first hypothesis of our research has been confirmed.

Regarding hypothesis no. 2 - *The success of the students in the examination significantly depends on their level of satisfaction*, the values obtained allow us to outline the following conclusion: The higher the degree of student satisfaction, the higher the grades are.

Thus, the second hypothesis is confirmed - the existence of a significant relation between the average marks obtained in the academic year 2018-2019 and the level of academic satisfaction of the students ($\chi 2$ = 87,997, df. = 12, n = 2384, p <01).

5. Conclusions

The information obtained from the processing and interpretation of the data show that there are aspects the

subjects in the sample are satisfied with, but there are also aspects that they are not satisfied with. The students had the opportunity, during the survey, to express their opinions, personal and professional needs.

Among the aspects that generally please the students, we can mention:

- the actuality and importance of the notions taught, their explanation and understanding; more than half of the subjects (61.83%) consider receiving relevant and complete information for the field they are preparing in, within the university courses they attend;
- the modern teaching methods used;
- the existence of informational resources (coursebooks, workbooks, etc.);
- the university teachers' availability for communication and clarification of some professional problems;
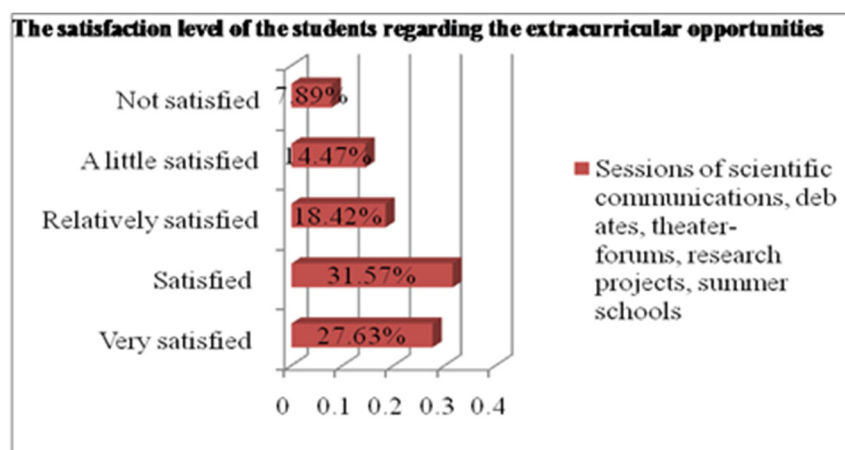- the extracurricular opportunities offered by the study program.

The aspects that the students declare, for the most part, relatively satisfied with are: objective evaluation and marking; emotional support offered by the university teachers.

A number of issues that the students think they could be improved include:

- the application of theory - the subjects want a greater emphasis on putting into practice the application of the notions, of the theory taught;
- a better correlation of the theoretical notions (from the first two years) with the pedagogical practice (organized and carried out in the third year of psycho-pedagogical training) - the students affirm that this time gap facilitates the forgetting of the pedagogical theory;
- the attitude of some pedagogical practice mentoring teachers: the students want a closer relationship, based on emotional support.

The recorded data represent a guiding mark in the process of evaluating student satisfaction, in order to ensure the quality of higher education, to meet the academic expectations of the students. Based on these results, we can outline the following *recommendations*:

- focusing of the management of universities and teachers on identifying and understanding all the students' needs and expectations;
- analysing the relevant information regarding student satisfaction, drawing up preventive and corrective actions and strategies;
- the teachers' focus on the student, especially from the perspective of emotional-affective support; improving relations with the students from the perspective of the following aspects: availability for communication, providing constructive feedback, encouragement, guidance.
- changes in the curriculum of the Teacher Training Department, in the sense of distributing the number of hours allocated to pedagogical practice, so that it starts earlier than the third year, in order to develop in parallel with the psycho-pedagogical disciplines *The theory and methodology of training*; *Didactics Specialization.*
- the continuous improvement of the quality of the didactic and research activity carried out by the students in the university, with emphasis on the valorisation of metacognition; in addition to the metacognitive dimension, the non-cognitive dimension of personality is equally important, which influences the adaptation to the academic environment and the success in exams.

Authors note:

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Pre-Service Teachers' Self-Efficacy and Attitudes Regarding Using Motifs from Neuroeducation in Education and Teaching

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Pre-Service Teachers' Self-Efficacy and Attitudes Regarding Using Motifs from Neuroeducation in Education and Teaching

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Abstract

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Change, Pre-Service
Teachers.

Neuroeducation is defined as a growing interdisciplinary field based on the synergic connection between neuroscience, cognitive science, psychology and education to improve the theoretical and practical understanding of learning and education. Besides the characteristics of the learners, the process of implementation of an innovative approach such as neuroeducation in the classroom involves psycho-social characteristics of the educators, such as teacher self-efficacy and attitudes toward change. The aim of this research was to explore which factors may explain the variance in pre-service teacher's attitudes towards using concepts from neuroeducation in education and teaching. Thirty-three Israeli pre-service teachers (PSTs) who participated in a neuroscience training program filled out a battery of questionnaires targeting their self-efficacy and attitudes toward change. A regression analysis revealed a positive correlation between PSTs' roles regarding combining neuroscience in education, the amount of time they are willing to invest in introducing change in their teaching methods and attitudes toward change in combining knowledge from neuroscience in education. Also, a negative correlation between PSTs' self-efficacy and attitudes toward change regarding combining knowledge from neuroscience in education was found. Possible explanations and the contribution to knowledge were discussed.

Zusammenfasung

Schlüsselworte:
Neuropädagogik,
Selbstwirksamkeit
der Lehrer,
Einstellungen
gegenüber
Veränderungen, Pre-
Service-Lehrer
(Lehrer vor dem
Dienst).

Neuropädagogik wird als ein wachsendes interdisziplinäres Feld definiert, das auf der synergetischen Verbindung von Neurowissenschaften, Kognitionswissenschaft, Psychologie und Bildung beruht, um das theoretische und praktische Verständnis von Lernen und Bildung zu verbessern. Neben den Merkmalen der Lernenden beinhaltet der Umsetzungsprozess eines innovativen Ansatzes wie der Neurpädagogik im Klassenzimmer auch psychosoziale Merkmale der Pädagogen wie die Selbstwirksamkeit des Lehrers und die Einstellung gegenüber Veränderungen. Das Ziel dieser Forschung war es, herauszufinden, welche Faktoren die Unterschiede in der Einstellung des Pre-Service-Lehrers zur Verwendung von Konzepten aus der Neurpädagogik in Bildung und Unterricht erklären können. Dreiunddreißig israelische Pre-Service-Lehrer (PSTs), die an einem neurowissenschaftlichen Schulungsprogramm teilgenommen haben, füllten eine Reihe von Fragebögen aus, die auf ihre Selbstwirksamkeit und ihre Einstellung gegenüber Veränderungen abzielten. Eine Regressionsanalyse ergab eine positive Korrelation zwischen den Rollen von PSTs in Bezug auf die Kombination von Neurowissenschaften in der Bildung, der Zeit, die sie bereit sind, in die Einführung von Änderungen in ihren Lehrmethoden zu investieren, und der Einstellung gegenüber Änderungen bei der Kombination von Wissen aus Neurowissenschaften in der Bildung. Es wurde auch eine negative Korrelation zwischen der Selbstwirksamkeit von PSTs und der Einstellung zur Kombination von Wissen von Neurowissenschaften (NS) in der Bildung gefunden. Mögliche Erklärungen und der Beitrag zum Wissen wurden diskutiert.

1. Introduction

In recent years, a growing number of researchers in the field of sciences of education have manifested interest in developing a new science of learning that can contribute to evidence-based policies and practices in education (e.g., Ansari, DeSmedt, & Grabner, 2012; Meltzoff, Kuhl, Movellan, & Sejnowski, 2009). Neuroeducation is defined as a growing interdisciplinary field based on the synergic connection between neuroscience (NS), cognitive science, psychology and education in an effort to improve the theoretical and practical understanding of learning and education (Devonshire & Dommett, 2010; Nouri, 2013; Rodgers, 2015). So far, only few studies have investigated the implementation of neuroeducation in practice.

Changing teachers' practices by including elements of neuroeducation might take time and requires ongoing professional development and support. Thus, there is merit to the idea that adoption and diffusion of an

innovation or practice is tied to self-efficacy. Since neuroeducation (NE) is a relatively new discipline, there is a gap in the research between NE as a broader discipline and how it infiltrates the school settings, or specifically how motifs from the neuroeducation field are implemented in the classroom. It is essential to explore how educators apply and assess the NE-grounded approaches they utilize in the classroom, and the role that self-efficacy plays. Therefore, teacher self-efficacy in general and specifically in implementing motifs from NE in classes was targeted in this study, with the participation of pre-service teachers (PSTs). It was assumed that PSTs' self-efficacy may increase through mastery experiences, gained through perseverant effort and accompanied by feedback from others in a non-threatening environment indicating that the pre-service teachers possess certain levels of capability (Bandura 2006, in Van der Linden et. al, 2015). Specifically, this paper presents the findings of a quantitative study conducted among PSTs in Israel, who participated in a teacher-training program based on NE motifs. The psycho-social characteristics of the pre-service teachers may have a mediating role between what they acquired in the training program and the implementation of the acquired knowledge in the lessons.

2. Theoretical foundations

According to the neuroeducation principles, knowledge of the brains' functions involved in the learning process could impact educational strategies to promote efficient learning. This is due to understanding brain mechanisms that regulate learning and memory processes (Blakemore & Frith, 2005). Implementation of this knowledge in the education system requires educators who believe in this way of thinking and feel capable to teach according to the NE motifs. An important concept related to this belief is Self-Efficacy, which refers to individuals' judgment of their capabilities to organize and execute courses of action required to achieve desired performances (Bandura, 1997).

"Teacher self-efficacy" (TSE) refers to the teachers' beliefs in their capability to organize and execute courses of action required to successfully accomplish a specific teacher task in a particular context (Tshene-Moran & Woolfolk-Hoy, 2001). This factor represents the affective component of their attitudes (Rosenberg & Hollande, 1960) in regard to using motifs from neuroeducation in pedagogical techniques. Research on self-efficacy has implications for the advancement of neuroeducation because there is a reciprocal relationship between

teachers' self-efficacy and their instructional qualities (Holzberger, Philipp & Kunter, 2013; Murphy, 2017). Since TSE can impact their motivation, planning, and competency, and in turn influences behavior, it can also impact teachers' performance (Bandura & Adams, 1977; Tschannen-Moran & Woolfolk Hoy, 1998). In addition, according to Tunks and Weller (2009), a successful course of change entails that people restructure their patterns of behavior, key beliefs about themselves and their abilities.

Attitudes toward introducing change

One of the main NE field's purposes is to suggest new evidence-based teaching methods. Educational systems are currently under pressure to implement changes and achieve greater efficiency (Avidov-Ungar & Forkosh-Baruch, 2018; Ferrari, Mura, & Diamantini, 2018; Fullan, 2007; Maskit, 2011). The burden of implementing such changes has shifted from the administration to the teachers. Introducing and implementing pedagogical changes involve great difficulties, particularly in cases in which educational reform is not introduced by the same unit expected to implement the changes (Fullan, 2007; Mariage & Garmon, 2003). An example for this can be seen In Israel. The Israeli Ministry of Education introduced a national program termed "Israel moves to a Higher Grade" in which innovative pedagogy is employed to create meaningful learning. This trend has been integrated in the colleges of education, in which teachers and educators strive to influence pre-service teachers to pursue their roles as leaders (Avidov-Ungar & Forkosh-Baruch, 2018). While the Israeli Ministry of Education officially certified that the program should be implemented, the in-service teachers in schools are expected to implement it and the pre-service teachers are expected to receive the appropriate training on the integration of the new program in their practice. The implementation process sometimes causes frustration and confusion among the Israeli pre-service teachers. Exploring the teachers' attitudes toward change might offer valuable insights on the dynamic of their readiness and preparedness to accept and implement a new program.

Attitude is a psychological construct, a mental and emotional entity that inheres in, or characterizes a person (Allport, 1935; Perloff, 1993). An attitude consists of three components: cognitive, affective and behavioral (Rosenberg & Hovland, 1960). Attitudes form and change in three contexts: the person, social relationships, and

sociohistorical/ sociopolitical occurrences (Albarracin & Shavitt, 2018). Maskit (2011) researches in-service teachers' attitudes toward change, and suggests further examination of the various effects of teachers' professional development on their attitudes toward pedagogical changes – changes regarding different teaching strategies concerning students, teaching content, and the teacher's own educational orientation.

Teachers' attitudes were researched widely and in different contexts. However, only few studies examined teachers' attitudes regarding neuroeducation. Pickering and Howard-Jones (2007) reported educators' enthusiasm for neuroeducation from a sample of teachers attending neuroscience professional development courses. Following these promising results, Serpati and Loughan (2012) expanded the findings into a questionnaire to assess the teachers' perceived importance of neuroeducation and reached similar results.

While Serpati and Loughan (2012) assessed the importance of understanding scientific contents from the NS field in education and teaching and the importance of combining NS in education and teaching in their questionnaire, there was no reference to the issue of teachers' roles regarding combining NS in education. According to Phillippo and Stones (2013), teacher roles, implying what is expected from them as professional teachers, have tended to focus on the curricular instruction within classrooms, but may have wider implications and are critical to teacher characteristics related to their ultimate practice. Therefore, our study takes into account the teacher's role regarding combining NS in education, teaching and learning. This factor can also represent the cognitive component of their attitudes (Rosenberg & Hovland, 1960) regarding using motifs from neuroeducation in education and teaching.

Readiness for change equates to a preparation stage, whereby individuals have positive attitudes toward a change and indicate an inclination to act in the immediate future. Thus, one crucial element of the readiness to make such changes is the attitude of individual administrators and teachers regarding the change. Moreover, readiness for change requires the willingness to change (Holt & Vardaman, 2013). Maskit (1998) defined the different factors, which influence teachers' attitudes toward the introduction of changes in teaching methods. One of the factors is teachers' willingness to invest time in introduction of changes in their teaching methods. The author defined this factor as the amount of time the

participants are willing and ready to invest in practice. In this study, this factor represents the behavioral component of their attitudes (Rosenberg & Hovland, 1960) regarding using motifs from neuroeducation in education and teaching, and according to the literature a positive correlation between teachers' willingness to invest time in introduction of change and attitudes toward the change is expected.

From the summary of the literature above, a gap in knowledge concerning TSE and teachers' attitudes regarding neuroeducation implementation is revealed. Therefore, the aim of this study is to explore which factors may explain the variance in pre-service teachers' attitudes regarding using motifs from neuroeducation in their education and teaching practice.

3. The research hypotheses

1) Pre-service teacher's perceived roles regarding combining NS in education, teaching and learning and the amount of time they are willing to invest in introduction of changes in their teaching methods will significantly explain the variance in attitudes towards change (combining knowledge from NS research in education).

2) Pre-service teacher's self-efficacy in combining NS knowledge in education, teaching and learning will significantly explain the variance in attitudes towards change (combining knowledge from NS research in education); higher self-efficacy is related to more positive attitudes.

4. Research Methodology

Research participants and design

The participants were pre-service teachers in their 2nd year of studies in the special education track, from two teacher-training colleges in the center of Israel. Ninety pre-service teachers participated in a Neuroeducation Training Program (NTP) during a reading course in the academic year of 2017-2018. During the program, motifs and teaching methods from NS were implemented in a reading course. The participants were requested to complete an online battery of questionnaires at two time points: before and after the training program. Thirty-three participants (36% response rate) completed the entire battery of questionnaires and were included in the current analyses. Their age ranged between 19 to 57 (mean = 24.8, *SD* = 6.19), 32 female and one male.

Program's description

The NTP is an intervention program for pre- service teachers in which motifs from NS were implemented during a reading class. The aims of the NTP were to present an innovative research field for the future teachers, to present evidence- based teaching methods for practice in class and modeling interdisciplinary teaching by implementing neuroscience motifs within another course. The intervention program included ten lessons, each focused on a subject, such as neuromyths, neuroplasticity, mirror neurons, brain and reading and spaced learning. Two main motifs were chosen which were studied in-depth throughout the program: learning in context and metacognition. Each concept from the NS field was connected to the themes studied in the reading course by the lecturers. Three lecturers, including the main researcher of the study, taught the lessons of the intervention program, according to a standard syllabus and lesson plans.

Research tools

The research tool package included five online questionnaires. The questionnaires were adapted for usage in the Hebrew language and validated psychometrically for the present research in an expert validation procedure and tested in a pilot study with 19 participants for reliability tests (Luzzatto & Rusu, 2018).

1. *Teacher Self- Efficacy scale* (based on TSES, Tscannen-Moran & Woolfolk Hoy, 2001). This scale includes 24 items. Strong agreement (5) represents students' strong beliefs that they have high abilities and competence in education and teaching. The overall reliability of the scale is very high (α= .97).

2. *Teacher self-efficacy questionnaire* (based on Lazar, 2014). This scale includes 19 items out of the original 25 items of the scale. Strong agreement (5) represents high teacher's self-efficacy. The overall reliability of the scale was high (α = .89). 6 items that relate to self-efficacy regarding combining NS in education were added to the original scales and their reliability was tested separately. General SE in education and teaching had a value of α=.85, and SE in combining NS in education and teaching and learning had a value of α=.80.

3. *Attitudes toward change* questionnaire (based on Priester & Petty, 1996, in Zach, 2012). This scale includes six items (out of the original 18 items of the scale: The Strong agreement (5) represents positive attitude towards change – combining knowledge from NS research in in education and teaching. The overall reliability of the scale is acceptable (α = .763).

4. *Teacher attitudes of neuroeducation questionnaire* (based on Serpati & Loughan, 2012). This questionnaire includes three sub-scales: *Sub-scale 1 - The importance of understanding scientific contents from the NS Field in education and teaching.* This sub-scale includes ten items. A high score (5) represents high importance related to understanding scientific content from the NS field. The overall reliability of the scale is good (α = .80). *Sub-scale 2: The Importance of Combining NS in Education and Teaching* - This sub-scale includes five items. A high score (5) represents high importance related to combining NS in education. The overall reliability of the scale was α = .73. *Sub-scale3: Teachers' Roles regarding Combining NS in Education* - This sub-scale includes five items. Strong agreement (5) represents a positive attitude towards change – combining knowledge from NS research in education. The overall reliability of the scale was high (α = .86).

5. *Attitudes toward the introduction of changes in teaching methods questionnaire* (based on Maskit, 1998): Four sub-scales were identified in this questionnaire: *Sub-scale 1: Attitudes toward changes in teaching methods: Cognitive and affective aspects* -This sub-scale includes nine items (out of the original 14 items of the original sub- scale). A high score (5) represents strong agreement with each statement related to introduction of changes into teaching methods. The overall reliability of the scale is high (α Cronbach = .85). *Sub-scale 2: Attitudes toward changes in teaching methods: Willingness aspect*- This sub-scale includes ten items. A high score (5) indicates that the respondent is very willing to invest time in introduction of changes in his/her teaching methods. The overall reliability of the scale was high (α-Cronbach =

.79). *Sub-scale 3: Factors That May Assist in Introduction of Change Processes*- This sub-scale includes all original nine items. Strong agreement (5) represents high impact (assistance) of each factor on the introduction of the process of change. The overall reliability of the sub-scale is acceptable (α Cronbach = .77). *Sub-scale 4:*

Teacher perceptions. This sub-scale includes five items which are focused on teachers' perception of teaching as evidence based. Strong agreement (5) represents a strong belief that teaching should be an evidence- based profession. The overall reliability of the sub-scale is acceptable (α = .72).

5. Results

Results are presented according to the variables connected to the implementation of NS in education (table no. 1).

Table no. 1. Descriptive statistics of the research variables

	Minimum	Maximum	Mean	SD
(1) Attitudes towards change – Combining knowledge from NS research in education	3.00	5.00	4.24	0.55
(3) Pre-service teachers' Self Efficacy-NS knowledge	1.75	4.50	3.23	0.81
(8) Pre-service teachers' beliefs about their abilities and competences (SE)	3.04	5.00	4.03	0.52
(2.1) Understanding scientific content from NS field is important for the following topics	2.70	5.00	4.16	0.63
(2.2) The importance of combining NS in education	1.80	5.00	3.78	0.81
(2.3) Pre-service teachers' roles regarding combining NS in education	2.00	5.00	3.87	0.75
(4) Attitudes towards introducing change in teaching methods	2.33	4.78	3.85	0.56
(5) The amount of time Pre-Service teachers are willing to invest in introducing of changes in their teaching methods	2.80	5.00	3.95	0.58
(6) Factors that may assist in introducing change processes	2.22	5.00	3.35	0.73
(7) Pre-service teachers' attitudes toward evidence -based teaching	2.60	5.00	3.75	0.75

N=33

The results of the multiple regression analysis for explaining the variance in the criteria are presented in figure no. 1.
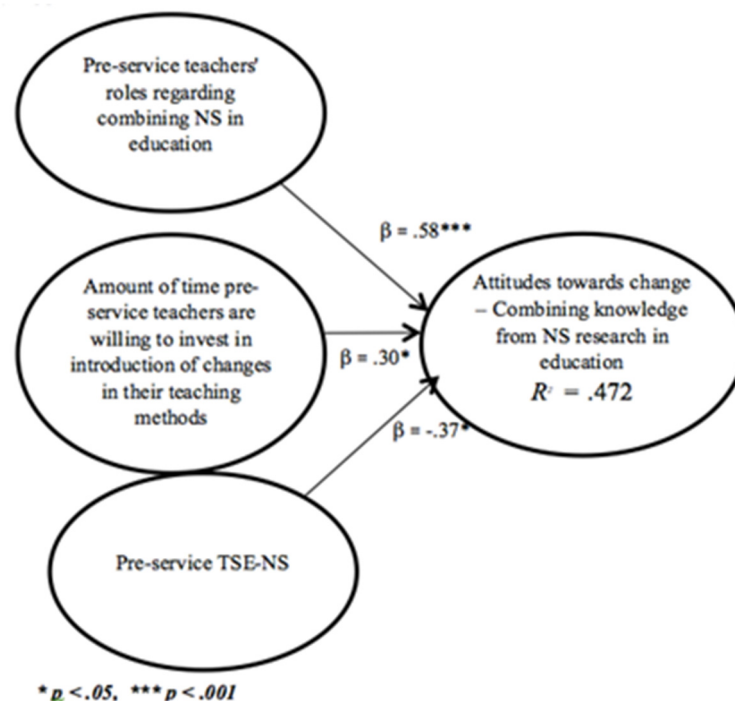

Figure no. 1. Multiple regression analyses performed for explaining the variance in pre-service teachers' attitudes towards including concepts from NS in their pedagogical practice

According to the data analysis, 47.2% of the variance in PSTs' attitudes towards combining concepts from

neuroeducation in education and teaching is significantly explained by teachers' roles regarding combining NS in education (β = .58, *p* = .001), the amount of time PSTs are willing to invest in introduction of changes in their teaching (β = .30, *p* = .042) and TSE regarding using concepts from neuroeducation in education and teaching (β = -.37, *p* = .017). In other words, the **more** the PSTs' agreed with their roles regarding combining NS in education, the **more** time they are willing to invest in introduction of changes in their teaching, and the **less stronger** is their self-efficacy regarding the use of concepts from neuroeducation in education and teaching – the level of favorability of the attitudes towards change – combining knowledge from NS research in education and teaching is **higher**. Therefore, the first hypothesis was confirmed, while the second hypothesis was refuted.

6. Discussions and conclusions

The aim of this study was to explore which factors may explain the variance in PSTs' attitudes towards introducing change, i.e. using concepts from neuroeducation in their pedagogical practice. The variables targeted in this research correspond to the three components of the attitudes (Rosenberg & Hovland, 1960): cognitive, affective and behavioral. The PSTs' roles regarding combining NS in education deal with the pre-service perceptions of roles and represent the cognitive component. The amount of time PSTs are willing to invest in introduction of changes in their teaching may represent the behavioral component of the attitude, and the pre-service TSE relating implementation of neuroscience in education may represent the affective component.

The Israeli PSTs' perceived roles regarding combining NS in education, teaching and learning and the amount of time they are willing to invest in the introduction of changes in their teaching methods will significantly explained the variance in attitudes towards change (combining knowledge from NS research in education). Their perceptions of the teacher's roles as central and their willingness to invest more time in introduction of change in their pedagogical methods was related to more favorable attitudes. Several possible implications emerge from the findings. Since a positive correlation was found between perceptions of the teacher's role as central and favorable attitudes toward introduction NS in teaching, a

future NS teacher training program should take this finding into consideration in the planning stage. Thus, the professional identity of the teacher as a professional should also be considered to reinforce the understanding that scientific professional knowledge of teaching and learning mechanisms may contribute to being a better teacher and increase the understanding of the way students learn.

Regarding the finding that the amount of time PSTs are willing to invest in introduction of changes in their teaching methods was positively correlated with attitudes toward implementation of change, a possible implication of this might be for the education decision-makers and policymakers. The findings support the idea that it is important to allocate time for teachers to examine practices in introducing changes in their teaching and allow them the space and time resources.

While the first two components were positively associated with the attitude toward change in implementing NS in education, the TSE component was associated in a negative connection. The second hypothesis, i.e. pre-service TSE in combining NS knowledge in their pedagogical methods will significantly explain the variance in attitudes towards change (combining knowledge from NS research in education), was refuted in this study. This finding was surprising in regards to previous studies, since according to the literature, teachers' high or low efficacy may influence levels of change's implementation (Stanton, Cawthon, & Dawson, 2018), and that change-related self-efficacy proved to be a solid predictor for positive attitudes and behavior in organizational changes (Zala-Mezö, Raeder, & Strauss, 2019).) In their study from 2013, a number of 700 elementary school teachers were surveyed; the data indicated a positive association between self-efficacy and attitudes toward change. In general, teachers with high levels of self-efficacy were reported as being more open to the idea of changing their practices (Brenner, 2013). However, contradictory findings can also be found in the literature. Lee, Cawthon, and Dawson (2013) posed the question: how does high teacher self-efficacy relate to pedagogical conceptual change? Results indicated that self-efficacy was not necessarily predictive of greater integration of a suggested change in the teaching methods. Rather, some teachers with high self-efficacy were found to implement at higher levels while others

were not. The authors suggested an explanation to this finding, by saying that personal stressful events, such as getting married or leaving home might influence TSE at specific time periods. This might also be a possible explanation for this finding in this study, since the pre-service teachers in their second year of studies sometimes experience significant life events. Thus, although they have positive attitudes toward implementing neuroscience motifs in education, they do not feel they have the efficacy to do so.

In conclusion, this study contributes to knowledge in several levels: theoretical, methodological and practical. On the theoretical level, this study expands the knowledge concerning implementation of motifs from the field of neuroeducation in education and teaching pre-service teachers, by focusing on the psycho- social characteristics of those who are expected to implement changes in teaching methods in the future. Also, this study sheds light on the factors that influence attitudes towards change with

the emphasis on combining knowledge from NS research in education and challenge the connection between self-efficacy and attitudes. On the methodological level, the research offers a new valid and reliable package of questionnaires examining TSE and attitudes toward change, both general and specific to implementation of NS in education. In terms of applied values, the research results may contribute in constructing training programs dealing with neuroeducation in other countries and cultures. Such programs should not only promote the importance of evidence-based teaching and may change teaching methods but will also pay attention to psycho-social characteristics of the people involved in the implementation of such a change. Also, longitudinal studies, which involve more support to teachers implementing change and perhaps more detailed observations should be conducted in order to better understand the impact of innovative teacher training programs on attitudes toward change and TSE concepts.

Authors note:

The authors have equal contributions to this article.

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The pedagogical research project - an essential tool for the development of research competencies in the field of education

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The pedagogical research project - an essential tool for the development of research competencies in the field of education

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| **Abstract** | The formation of the competencies necessary in the field of educational research implies both the acquisition of knowledge regarding this field and the specifics of the researches carried out here, as well as the capacities, the abilities to design different researches, on various topics, present and of interest, to carry them out, to monitor all the actions aimed at achieving the proposed finalities, validating hypotheses, finalizing the research undertaken, disseminating the results, capitalizing on them. To these, we add the development of an appropriate attitude, keeping to the principles of scientific ethics.
We consider the design phase to be particularly important for the success of it. The instrument that materializes the design activity of the research, the research project represents a unitary, coherent and logical structure of all the steps and actions that will be undertaken.
The present study aims to analyze the importance of this tool in the initial teacher training process, where training in the field of educational research has to occupy an important place. We used two research methods: the questionnaire survey and the analysis of the product activity. The sample of subjects was made up of 83 MA students from the Faculty of Letters, which also run in parallel with the Masters Program, the Psycho-pedagogical Training Program, level II and, within it, the Methodology of Educational Research discipline.
The results obtained from the investigation confirmed the value of the pedagogical research project in the formation of the researcher's competencies of the future teacher students. |

Keywords:
research design competencies; research project; research design.

| **Zusammenfasung** | Die Bildung der notwendigen Kompetenzen für Bildung sieht die Aneignung von Kenntnissen über dieses Gebiet und Besonderheiten der hier geleisteten Forschungen vor, aber auch Fähigkeiten und Fertigkeiten zum Planen von verschiedenen Forschungen über verschiedene heutige und Interessenthemen, bzw. die Durchführung dieser Forschungen, Überwachen aller Schritten zum Erreichen der gezielten Ergebnisse, Validierung der Voraussetzungen, Beenden der vorgenommenen Forschungsmassnahmen, Verbreiten und Verwerten der Ergebnisse. Zudem vermerken wir auch die Entwicklung eines passenden Verhaltens unter Einhalten der Voraussetzung der wissenschaftlichen Ethik.
Finden wir die Planung der Forschung als sehr wichtig zum Erfolg der Forschung. Das Werkzeug zur Planung der Forscjung, bzw. der Forschungsplan, ist eine einheitliche kohärente und logische Struktur aller zum Durchführen notwendigen Schritten und Handlungen.
Das heutige Studium sieht die Überprüfung der Wichtigkeit dieses Werkzeuges zur ursprünglichen Bildung der Lehrer vor, wobei die Bildung im Gebiet der Bildungsforschung eine wesentliche Rolle spielt.
Ich habe zwei Forschungsmethoden angewendet: Befragungsbogen und Analyse der Ergebnisse der Tätigkeit.
Die befragenen Personen bestand aus 83 Masterstudenten von der Fakultät für Literaturwissenschaft, die zugleich zu dem Masterat auch die Bildung im Bereich der Psychopädagogie, Stand II, Fachbereich Methodologie der Bildungsforschung, besuchen.
Die infolge der Prüfung erzielten Ergebnisse bestätigten den Wert des Forschungsplanes zur Bildung der Forschungskompetenzen der künftigen Lehrer. |

Schlüsselworte:
Kompetenzen zum Planen der Forschung; Forschungsplan; Design der Forschung.

1. Introduction

The initiation of research in the field of education is a challenge for any teacher, even for those with experience in the field, even more so in the case of the debutants or the ones who are during their initial professionalisation period. The importance of this segment of a teacher's training, despite a certain degree of difficulty, makes it necessary to pay increased attention even from the beginning stage of the initial teacher education. The carrying out of some pedagogical research requires first of all a good knowledge of the specificity of the scientific research, a very close connection with the educational practice, in order to be able to then design and carry out such steps that have the purpose of improving the didactic

activity, the development of the field from a theoretical and a praxeological perspective.

Each stage of research is important and must be approached with maximum rigor and integrated in the general context of the whole process. Due to the complexity of the research, the multitude of variables involved, the need to manage them properly and minimize the possibility of random occurrence, a proper and appropriate design is required.

The activity of designing some research which has itself a high degree of complexity, involves a joint, a harmonious and logical combination of all stages and components, so as to provide the premises for a successful pursuit.

A well-made research project does not implicitly guarantee the success of the research in question, but it is a condition for it.

The training of the designing skills of pedagogical research can be achieved even from the initial stage of the teachers' training. The first level of psycho-pedagogical training offers the possibility of initiating students in the field of research in disciplines such as *Educational*

Psychology or *Pedagogy*. The second level, being one of thoroughness, assures the development of the students' research competencies, especially in the *Methodology of Educational Research* discipline.

In the last mentioned discipline, first of all, the competency to design pedagogical research, through elaborating research projects, is practiced.

2. The specifics of the designing activity of research in the field of education

Any pedagogical research involves a series of stages, each of them summing up specific actions (Walliman, 2011; Seltman, 2012; Toshkov, 2018). Plomp (2013, p. 13), inventories several functions (roles) of the design of research: to describe; to compare; to assess; to explain or anticipate; to develop.

After choosing and formulating the theme, the elaboration of the research design is probably one of the most important decisions of the researcher (Abutabenjeh & Jaradat, 2018).

F.R. Mogonea (2010, p. 40) and F. Mogonea (2013, pp. 79-80) present a possible structure of educational research (see table no. 1).

Table no. 1. The enterprise of (ameliorative) pedagogical research (Mogonea, 2010, p. 40, Mogonea, 2013, pp. 79-80)

Stages	Substages	Conditions
A. Preparing the research	Choosing the research problem	It must be current, original, scientifically meaningful, well motivated, accurately formulated; it must identify solutions for improvement; it must be of general interest (and not of a personal, individual one); it must know applicability, etc.
	Documentation	The study of the thematic bibliography, by source categories; the foreign bibliographic resources, actual in the problem; the critical presentation of the bibliographic aspects
	Establishing the working hypothesis, the purpose and the objectives	Establishing the working hypothesis ("if ... then ...", "the more ...the better...", "it is possible to ... if", "what would happen if ... "; the derivation of the particular hypotheses from the specific hypothesis; the clear determination of the purpose and objectives of the research, by work stages, etc.
	Establishing the methodology	Identifying the main methods to be used in the research, on stages of work, establishing the place, the time, the samples (experimental and control), setting the steps of the research, etc.
	Making the research plan	Making the research project that will prepare the stages, the steps to follow.
B. The implementation of the research	Applying the expected interventions	It assumes the implementation, the application of what was proposed (independent variables), the pursuit of the purpose, the objectives, the reformulation of the hypotheses, the tracking of the differences between the samples, etc.
C. Completing the research, capitalizing on results	The quantitative and qualitative data processing and interpretation	It is done in the posttest and retest when data between samples are compared quantitatively (statistically) and qualitatively (psycho-pedagogically) and the conclusions are drawn.
	Capitalizing on research and results	Dissemination, publication, generalization, enlargement

The research preparation phase ends with the development of the research project. We are going to present in what follows a possible structure of it (Bocoş, 2003, pp. 35-36):

- **presenting the researched problem**: definition; terminological delimitations, the clarification of the basic concepts, importance/ educational relevance; actuality; the motivation of choosing the theme;
- **synthesizing the state of problem research**, the solved issues and those that have not been satisfactorily solved, making critical analyzes by the researcher, anticipating its original contributions;
- **presenting the *basic*, fundamental hypothesis and the *secondary/ auxiliary assumptions***;
- **presenting the purpose and *objectives of the research***
- **describing the *research methodology*** and *concrete strategy used* in the course of the actual research, which includes the following elements:
- the place of research;
- the period of research;
- the stages and the substages;
- the research strategy;
- the study subjects involved;
- the content sample (with arguments and explanations);
- the subjects/ pupils and their characterization: age, sex, general level of training, level of training in the discipline of interest, level of intellectual development, level of physical development, social descent, professional status and others;
- independent variables/ variables dependent variables/ variables and so on.
- the research methodology;
- the material resources used and the costs involved in the operational data collection tools,
- the strategy for verifying and evaluating the results obtained by the subjects;
- the methodology for the processing of research data, including electronic work tools;
- **establishing the ways to capitalize on research.**

Although algorithmic, the previously presented structure needs to be personalized according to the conditions under which it is exploited, the type of research, the pursued objectives, the sample of subjects, and the researcher's experience.

Depending on the type of research, of intentionality, both quantitative and qualitative methods can be used (Astalin, 2013; White & Sabarwal, 2014; McKim, 2017; Mohajan, 2018; Janssens, Bos, Rosmalen, Wichers & Riese, 2018). The two paradigms, that of research based on quantitative methods and the other on qualitative methods, must not necessarily be seen in opposition but in complementarity. The first, the quantitative one, is known as the paradigm of scientific research, the other as the paradigm of socio-anthropological research (Atieno, 2009, p. 13). The selection of research methods and the development of the tools associated to them is an essential step in the unfolding of the research, which highlights one of the core competencies of a researcher, a competency that can be formed through initial professionalisation.

3. The research methodology

The **aim** of our research was to understand the role and importance of the pedagogical research project in the development of the future teacher students competencies in designing certain pedagogical research.

Derived from this goal, the **objectives** aimed at:

- knowing the students' opinion regarding the role of the discipline *The methodology of the educational research* in the formation of the competency to design some educational research;
- the self-evaluation of the research project, by reference to different stages or dimensions of the project;
- identifying the advantages and disadvantages of the pedagogical research project;
- the correlation of students' self-evaluation with the project evaluation, based on the evaluation scale.

The actions undertaken aimed to validate two hypotheses:

1. The pedagogical research project is a useful tool in forming the competency to design some educational research.

2. The students can make an objective self-evaluation on the successful and unsuccessful aspects of the pedagogical research project.

The research methodology

In order to validate the previously mentioned hypotheses and to achieve the research objectives, we capitalized on two research methods, accompanied by appropriate tools: the questionnaire survey and the analysis of the activity products (of the research projects developed by the students).

The questionnaire applied to the MA students consisted of 14 items with closed, semi-closed answers and also a few open-ended items.

The items of the questionnaire aimed to investigate the opinion of the subjects regarding:

- the importance of the competency meant to design pedagogical research for a teacher;
- the role of the *Methodology of educational research* and of the research project in the formation;
- development of the competency of designing certain research in the field of education;
- the most successful and the least successful part of the research project;
- the difficulties encountered in: reasoning behind the choice of the theme; making the documentation; formulating the purpose and the objectives of the research; making the assumptions and variables; presenting the research methodology;
- The advantages and disadvantages of the pedagogical research project in the training of a future teacher's research competencies.

For the analysis of the research projects developed by the students, we used an evaluation grid whose indicators were grouped into four categories: on the choice and formulation of the theme and the motivation of choosing it; on the theoretical foundation of the theme; on the specification of the hypotheses and the objectives of the research; on the choice of the research methodology.

The sample of subjects was made up of 83 MA students from the Faculty of Letters, University of Craiova, in their first year. 18 students (representing

21.69%) of the sample included in the investigation are, at the same time, teachers.

4. Results

The results obtained after the application of the two research methods allowed the verification of the truth value of the two hypotheses mentioned above.

We are presenting, for the beginning, the results that allowed the validation of the 1st hypothesis.

Thus, most of the students chose the first of the variants offered (to a large extent) when they answered the question about the importance of the competency necessary to design some pedagogical research, for a future teacher (see figure no. 1).
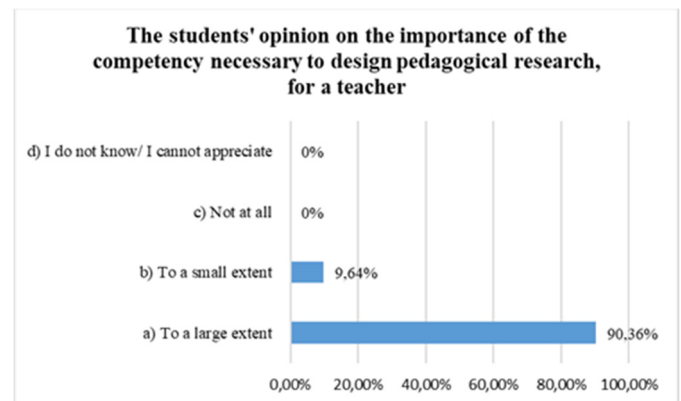
Figure no. 1. The students' opinion on the importance of the competency necessary to design pedagogical research, for a teacher

The results recorded in this item are similar to those in the item on the importance of the Methodology of Educational Research for the development of the design competency of research in the field of education
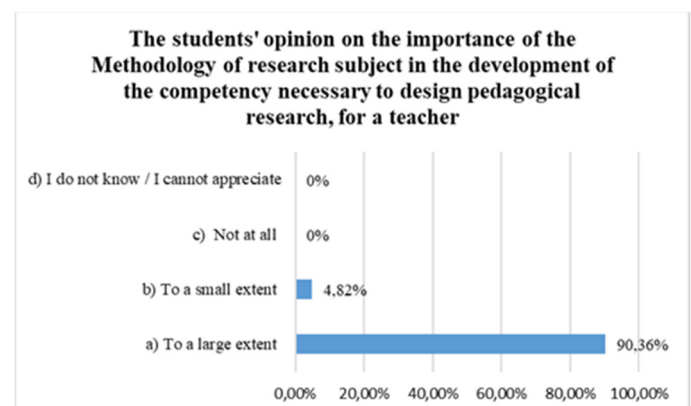
Figure no. 2. The students' opinion on the importance of the Methodology of research subject in the development of the

competency necessary to design pedagogical research, for a teacher

The students consider the research project to be useful in forming the competency to design pedagogical research, as the results presented in figure no. 3 show.
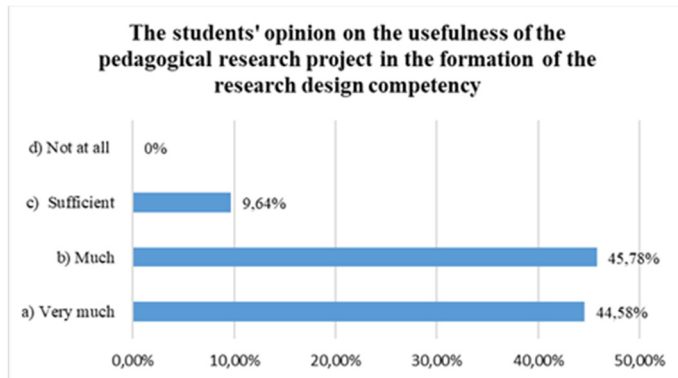
Figure no. 3. The students' opinion on the usefulness of the pedagogical research project in the formation of the research design competency

The following items of the questionnaire provided information able to ensure the validation of the second hypothesis of the research.

Regarding the complexity of the research project, the students appreciated that the documentation was the most complex part, as there can be seen in figure no. 4.
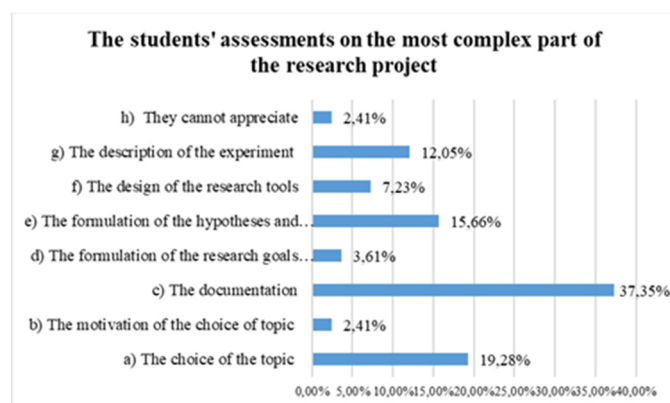
Figure no. 4. The students' assessments on the most complex part of the research project

Two of the questionnaire items, with open answers, asked for the students' opinion on the part of the research project they think they managed very well or not so well.

After centralizing the answers, we obtained the following hierarchy:

The best done part of the project:
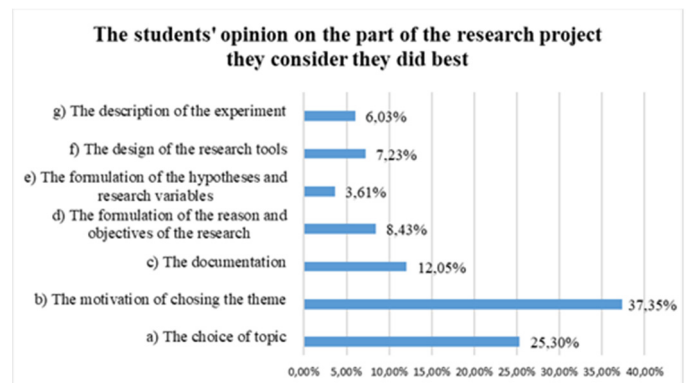
Figure no. 5. The students' opinion on the part of the research project they consider they did best

The least developed part of the project:
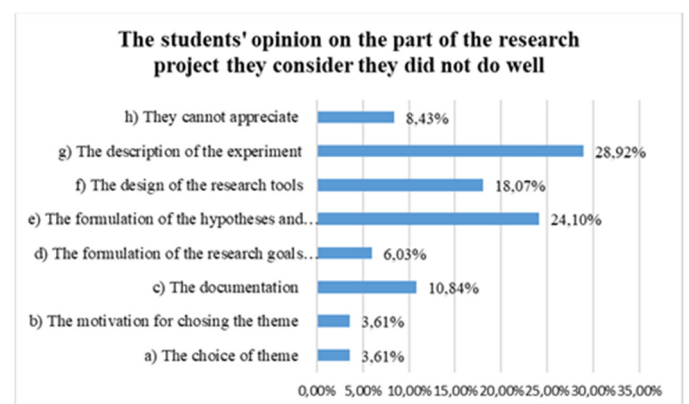
Figure no. 6. The students' opinion on the part of the research project they consider they did not do well

The following items of the questionnaire investigated the MA students' opinion on the difficulties they encountered during the different stages and sub-stages of the research project.

Thus, in motivating the choice of the theme, the students appreciated that they did not encounter difficulties in stating certain objective, scientific reasons (see figure no.7).
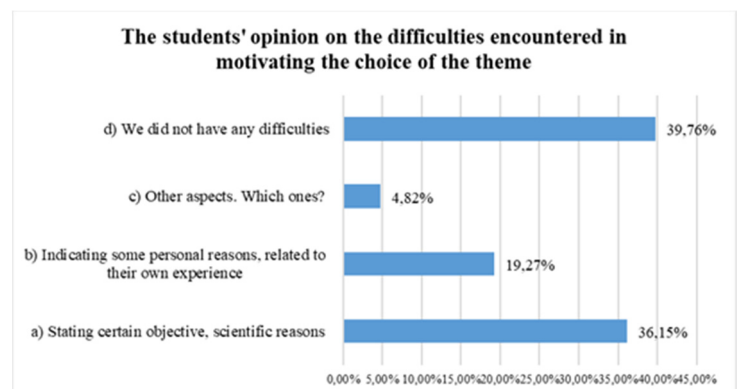
Figure no. 7. The students' opinion on the difficulties encountered in motivating the choice of the theme

Regarding the documentation, most of the students appreciated that they had difficulties in identifying some representative and current sources (figure no. 8).

The students' opinion on the difficulties encountered in the documentation stage

d) Correct source citation	13,25%
c) The combination of printed and electronic sources	15,66%
b) Balancing the proportion between the Romanian and foreign literature works	7,23%
a) Identifying certain representative and current sources	63,86%

0,00% 10,00% 20,00% 30,00% 40,00% 50,00% 60,00% 70,00%

Figure no. 8. The students' opinion on the difficulties encountered in the documentation stage

The formulation of the purpose and objectives of the research has also been an important stage of the research. Figure no. 9 shows a situation of the difficulties they encountered.

The students' evaluation of the difficulties encountered in formulating the purpose and objectives of the research

e) Another aspect. Which one?	0%
d) They cannot appreciate	3,61%
c) The insurance of the applicative, operational character	33,74%
b) The correct, concise, coherent formulation	37,35%
a) The correlation with the research theme	25,30%

0,00% 5,00% 10,00% 15,00% 20,00% 25,00% 30,00% 35,00% 40,00%

Figure no. 9. The students' evaluation of the difficulties encountered in formulating the purpose and objectives of the research

We are going to present in what follows the students' answers to the item that asked for their opinion on the difficulties encountered in formulating the research hypotheses (figure no. 10).

The difficulties encountered by the students in formulating the research hypotheses

f) Another aspect. Which one?	0%
e) They cannot appreciate	4,82%
d) Concise, clear, scientifically and grammatically correct articulation	7,23%
c) Anticipating ameliorative solutions	24,10%
b) Ensuring the consistency with the research theme, with the aim of it	33,73%
a) Their formulation in hypothetical, probable judgments	30,12%

0,00% 5,00% 10,00% 15,00% 20,00% 25,00% 30,00% 35,00% 40,00%

Figure no. 10. The difficulties encountered by the students in formulating the research hypotheses

The selection of the research methods and the indication of how to use them were the main obstacles students have encountered in choosing the research methodology, as can be observed in figure no. 11.
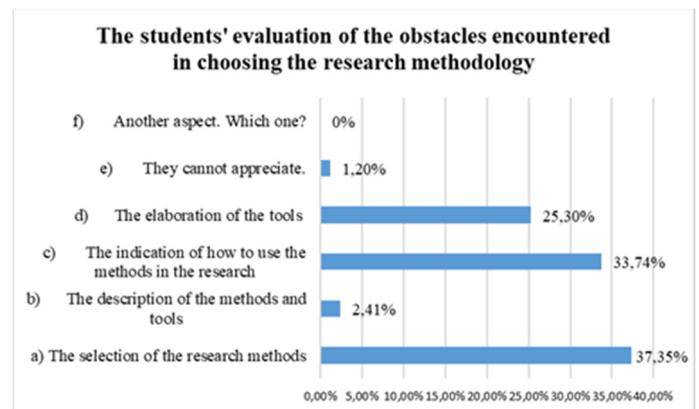
The students' evaluation of the obstacles encountered in choosing the research methodology

f) Another aspect. Which one?	0%
e) They cannot appreciate.	1,20%
d) The elaboration of the tools	25,30%
c) The indication of how to use the methods in the research	33,74%
b) The description of the methods and tools	2,41%
a) The selection of the research methods	37,35%

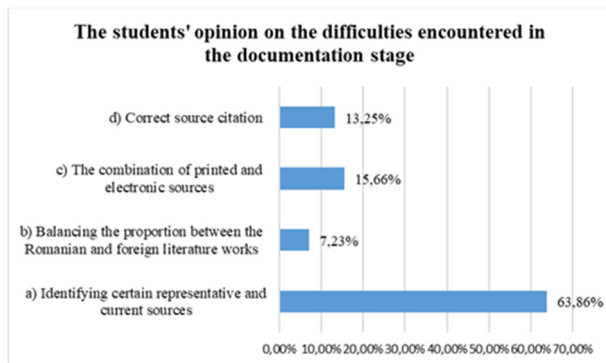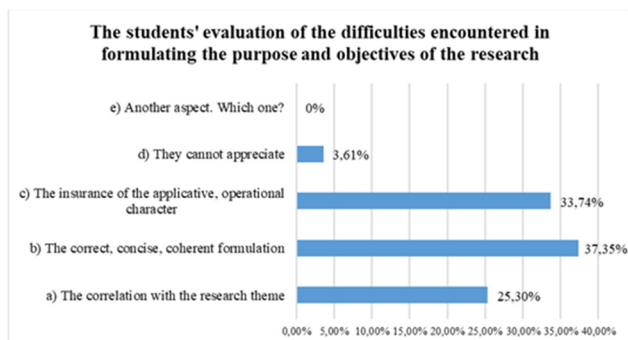0,00% 5,00% 10,00% 15,00% 20,00% 25,00% 30,00% 35,00% 40,00%

Figure no. 11. The students' evaluation of the obstacles encountered in choosing the research methodology

Figure no. 12 presents a hierarchy of the frequency with which the research methods were used. As you can see, the students mostly used the questionnaire and the interview, but also the test and the case study. In other methods, two students mentioned the sociometric test, and three respondents specified the observation.

We are stating that in this item the students had the possibility to choose more than one answers.

The methods of research exploited by the students in the elaborated research projects

j) Other methods. Which ones?	6,02%
i) The analysis of the students' activity products	22,89%
h) The analysis of the curriculum documents	6,02%
g) The analysis of the school documents	13,25%
f) The case study	31,32%
e) The psycho-pedagogical experiment	24,09%
d) The focus-group	9,64%
c) The conversation	42,17%
b) The test	31,32%
a) The questionnaire survey	65,06%

0,00% 10,00% 20,00% 30,00% 40,00% 50,00% 60,00% 70,00%

Figure no. 12. The methods of research exploited by the students in the elaborated research projects

The last two items have open answers and asked for the views of the subjects on the advantages and disadvantages of the pedagogical research project in the development of a future teacher's research skills.

Thus, among the advantages we mention:
- Acquiring new knowledge;
- The possibility to identify the current problems of education, as well as solutions;

- Forming skills of synthesis, of formulating personal opinions, argumentation;
- Developing the competency of self-knowledge, of managing problem-situations, the metacognitive competency;
- Knowing new research methods;
- Performing activities with an applicative character;
- Developing professional competencies;
- The possibility of developing research tools;
- Exercising the ability to interpret the results of research, to disseminate them;
- Familiarizing with curriculum documents;
- Correlating all sources for carrying out research project in your own way.

As disadvantages or risks, the students mentioned:
- The duration of the research project;
- The need for extensive documentation;
- The choice of inappropriate themes;
- The difficulty to find sources for the chosen theme;
- The particular nature of the obtained results.

The opinions of the students were then confronted with the results of the evaluation of their portfolios. For the evaluation there was used a grid containing 22 indicators, grouped in four categories: on the choice of the theme, its formulation and the motivation of the choice, on the theoretical foundation, on stating the hypothesis and the objectives, on the choice of methodology. According to the recorded scores, difficulties were recorded:

- for the first category of indicators, the one regarding the applicative character and the possibility;
- for the topic to find ameliorative solutions;
- for the second category of indicators, in the indicators on the critical analysis of the sources, their;
- correct quote, a balance sheet of the more or less successful aspects from quoted sources, regarding the marking of their own contribution;
- for the third category, in the indicators on formulating the hypothesis as probabilistic statements;
- and in the requirement that the assumptions should address the real problems and find better solutions;
- for the last category - in the indicators describing the way in which the research methods are used.

Table no. 2. The evaluation grid

Crt. no.	Indicators	Score (1-10)
I.	**Concerning the choice and formulation of the theme and the motivation of its choice**	
I.1.	The theme is current and of general interest	
I.2.	It has an applicative character, it offers ameliorative possibilities	
I.3.	It benefits from sufficient theoretical support	
I.4.	The title is sufficiently limited in relation to the complexity of the theme	
II.	**Concerning the theoretical foundation of the theme**	
II.1.	The studied papers are considered reference points and they are current	
II.2.	Relevant webographics sources carefully selected are also valorized	
II.3.	The sources are critically analyzed	
II.4.	They are correctly recorded, both in the text and in the final bibliography	
II.5.	A balance sheet of the achieved and less achieved aspects is made	
II.6.	One's own contribution is marked	
III.	**Specifying the hypotheses and research objectives**	

III.1.	The hypotheses are formulated as statements of probable value
III.2.	The hypotheses address real problems and outlook ameliorative solutions
III.3.	There is a real concordance between the hypotheses and the theme
III.4.	The formulation of the hypothesis is correct, concise, logical
III.5.	The objectives are consistent with the assumptions
III.6.	The formulation of the objectives is correct, concise, logical
IV.	**Choosing the research methodology**
IV.1.	The methodology is consistent with the theme, the assumptions made and the objectives set
IV.2.	A description of the methods is made
IV.3.	It is indicated how the methods are used in the research
IV.4.	The research tools are described
IV.5.	The research tools are attached
IV.6.	It is indicated how to capitalize on the research results

5. Discussions

The results obtained after the application of the two research methods confirm, in part and in correlation, the importance of the designing of the pedagogical research in general, as well as the pedagogical research project, in particular.

Students were given the opportunity, during a semester, to practice their competence in designing pedagogical research, following all the stages and actions specific to such an approach.

Each stage of this algorithm has been exemplified and developed, depending on the type of each research. The pedagogical research project, developed by the students during the semester, was part of their final, summative assessment at the end of the semester.

The students conducted a detailed self-analysis of the project, objectively capturing the successful and less successful aspects of the papers. The complexity of such an instrument requires not only a serious theoretical foundation, but also a good knowledge of the educational reality and the difficulties it faces. As a result, a first challenge for the students was precisely the choice and formulation of the research theme.

The documentation stage, one of the important stages of the project design, was demanding for the students as they had to meet the criteria and requirements of a scientific documentation, to identify the relevant and up-to-date sources, combining the possibilities offered by the printed texts with those offered by the Internet, and also use them correctly.

The greatest difficulties were encountered in the formulation of hypotheses and research variables. The difficulty comes first of all from the need to formulate hypothetical reasoning of some probabilistic statements, the truth value of which must be proved, demonstrated.

The students made a pertinent analysis of the advantages and disadvantages of the research project, mentioning, in particular, what was important to them, the practical utility of this instrument, its formative valences, especially from the perspective of a future teaching career.

The evaluation of the research projects, based on the presented grid, correlated with the students' opinion, expressed through the questionnaire confirmed the ideas already mentioned by the students. Following the application of the evaluation grid, we were able to identify the strengths and weaknesses of the research projects, we

learned about the successful aspects but also the typical mistakes, all of which were reported to the students after the evaluation of the works.

We can argue that in this case there is an agreement between the students' self-evaluation and the teacher's evaluation.

6. Conclusions

Designing an activity, regardless of its specificity, is a necessary action to ensure the success of that activity, especially if we are dealing with a complex situation which involves a multitude of aspects, elements, variables. The design action is embodied in a tool that, beyond the relatively algorithmic structure, must have sufficient flexibility that does not limit the possibilities for action, thereby affecting the possibility of achieving the proposed finality.

The pedagogical research project is such an instrument that enables those who develop it to anticipate the research, as responses to the following key questions: What are they aiming at? How can I do it? What can I do it with? How do I capitalize on what I have achieved?

Although creativity is needed to develop the project, as mentioned before, we believe that in order to reach this level, it is necessary to have a previous, constant and sustained exercise that allows the formation of automatisms, the ability to design research, perfectly articulated, logical and unitary.

For prospective teachers, achieving this goal is possible by repeatedly being in the situation to elaborate some or all of the research, capitalizing on various themes in the educational field.

The present study offered the opportunity to appreciate the usefulness of the pedagogical research project in forming the research competencies of prospective teachers.

Authors note:

The authors have equal contributions to this article.

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Pre-Service Teachers attitudes and knowledge concerning Sexual Health Education in the field of Special Education

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Pre-Service Teachers attitudes and knowledge concerning Sexual Health Education in the field of Special Education

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Abstract	
Keywords: Sexual Health Education, Special Needs, knowledge, attitudes, sexuality and disability.	The objective of this study was to investigate the impact on knowledge and attitudes to sexuality, as well as the capability to teach sexual education topics, of a Sexual Health Education training program designed for pre-service teachers in the field of Special Education in Israel. The findings from the pre/ post investigation and the comparison with the control group (i.e. pre-service teachers that did not participate in the SHE training program) highlighted the impact of the background variables such as religiosity, age and marital status on the knowledge of SHE topics and attitudes towards sexuality and disability. Also, the findings indicate that there is a pervasive lack of knowledge of SHE in relation to persons with special needs among the pre-service teachers in Special Education in Israel. As knowledge and attitudes toward sexuality and disability vary between demographic groups, it is recommended that SHE training courses to be tailored to the participants needs, as well as to enable discussions and reflection on the challenges they may encounter.

Zusammenfasung	
Schlüsselworte: Sexuelle Gesundheitserziehung, besondere Bedürfnisse, Wissen, Einstellungen, Sexualität und Behinderung.	Ziel dieser Studie war es, die Auswirkungen auf das Wissen und die Einstellung zur Sexualität sowie die Fähigkeit, Themen der Sexualerziehung zu vermitteln, eines Trainingsprogramm zur sexuellen Gesundheitserziehung (SGE), das für werdende Lehrer im Bereich der Sonderpädagogik in Israel konzipiert wurde. Die Ergebnisse aus der Vor- / Nachuntersuchung und dem Vergleich mit der Kontrollgruppe (d.h. werdende Lehrkräfte, die nicht am SGE-Schulungsprogramm teilgenommen haben) haben die Auswirkung der Hintergrundvariablen wie Religiosität, Alter und Familienstand auf das Wissen über SGE Themen und Einstellungen zu Sexualität und Behinderung, hervorgehoben. Die Ergebnisse deuten auch darauf hin, dass es unter den werdenden Lehrkräften für Sonderpädagogik in Israel einen allgegenwärtigen Mangel an Kenntnissen über SGE in Bezug auf Personen mit besonderen Bedürfnissen gibt. Da das Wissen und die Einstellungen zu Sexualität und Behinderung zwischen den Bevölkerungsgruppen unterschiedlich sind, wird empfohlen, SGU-Schulungen auf die Bedürfnisse der Teilnehmer abzustimmen und Diskussionen und Überlegungen zu den möglichen Herausforderungen zu ermöglichen.

1. Introduction

Several recent studies indicate the importance of training programs for teachers intending to deliver Sexual Health Education (SHE) in mainstream schools (Arrington et al., 2018; Leung et al., 2019; McKay & Barrett, 1999) and in the field of Special Education (Owens, 2014; Thorpe & Oakes, 2019; Treacy et al., 2018). The lack of insufficient preparation of teachers for delivering SHE in Special Education (SE) has been reported as one of the obstacles preventing effective SHE for young people with special needs (Attwood, Henault, & Dubin, 2014; Goldman & Coleman, 2013; Klein & Breck, 2010; May & Kundert, 1996; Wilkenfeld & Ballan, 2011; Travers et al., 2014). Among other factors,

the perceptions of the sexual identity of people with disabilities may hamper teacher's delivery of SHE to students in SE (Swango-Wilson, 2010; Parchomiuk, 2013).

It has been found that the beliefs and cognitions of pre-service teachers (PSTs), as well as their knowledge and technical skills, can negatively impact not only what they teach when delivering SHE, but also their self-perceived teaching efficacy (Barnard-Brak et al., 2014; Howard-Barr et al., 2005; Thorpe & Oakes, 2019). Teachers also report as having inadequate training for teaching SHE (Arrington et al., 2018; Eisenberg et al., 2010). It is therefore critically important that SHE training programs should be offered to PSTs, and that, besides the competencies-based learning outcomes, these training

programs should also be assessed for their psycho-social effects (knowledge, attitudes, readiness to teach SHE) on the trainees.

Cultural backgrounds and religious beliefs have been shown to affect PSTs pre-existing knowledge, training and perceptions regarding SHE in general and in SE (Lapidot Berman & Firstater, 2018). It is therefore important that these factors be assessed in groups undergoing SHE training so that the course can be adapted accordingly, as it is possible that different levels of training will be needed amongst different demographic groups.

2. Theoretical foundation

SHE training programs are rooted in several models and approaches, such as: the cognitive theory (e.g. Lewin, 1951), the trans theoretical model (Prochaska et al., 1994), the health belief model (Abraham & Sheeran, 2005; Rosenstock, 1991), and health behaviour theory (Bronfenbrenner & Morris, 2007). Updated versions of these theories and models include an emphasis on self-efficacy, expectations, cues to action and demographic and socio-economic variables regarding the trainees (Taylor et al., 2007). SHE programs that are grounded in evidence-based theories and subjected to assessments of their outcomes appear to be more successful in meeting their goals (Haberland & Rogow, 2015). The attitudes of teachers about SHE, their knowledge on SHE topics and their willingness to teach SHE in special education can impact the success of SHE programs in SE (Argaman, 2018; Cozzens, 2006; Foley, 2008; Iyer & Aggleton, 2013; Peltzer & Promtussananon, 2003).

While some SHE programs in SE have been recently developed in Israel (Lachover & Argaman, 2007; Manor-Binyamini, Schreiber-Divon & Stein, 2013), there have not yet been sufficient studies of the impact of these programs on the teachers' attitudes and knowledge in relation to SHE for persons with special needs (Gerchenovitch & Rusu, 2018). One study was carried out in Israel investigating the effect of a program preparing the teachers to conduct SHE in a SE school (Manor-Binyamini et al., 2013), but this program focused mainly on the prevention of sexual harassment. A systematic literature review conducted by Schaafsma et al. (2015) on the preparation of teachers to deliver SHE for individuals with intellectual disabilities found that theoretical knowledge was not always translated into practice. Furthermore, clear methodologies for assessing the

outcomes of the SHE training programs were lacking (Schaafsma et al., 2017).

Based on the results of a literature systematic review aiming to identify the components of SHE curricula in the field of Special Education (Gerchenovitch & Rusu, 2018), a new SHE curriculum was formulated by the authors, together with other experts in the field of SE in Israel. This curriculum was delivered by the researcher (YG) and other three lecturers to pre-service teachers in SE at four colleges in Israel, during the 2017-2018 academic year (language of teaching: Hebrew). The main aspects of the SHE training program for pre-service teachers are presented below.

The SHE training program was designed to familiarize students with the various stages of sexual development, along with the understanding of the implication of disability in social and cultural contexts as well as on the individual's identity. The program also aims to teach ways of coping with real-life situations and dilemmas pertaining to sexuality, using professional tools to promote a discourse on subjects related to adolescence and sexuality among the SE population, while referring to specific characteristics of age and disability. The course goals are the following: (1). Cultivating positive attitudes to human sexuality in general and sexuality of persons with disability in particular; (2). Instilling basic knowledge of sexual development and behaviour of children and youths with and without developmental disabilities; (3). Raising awareness to situations of sexual risk, exploitation, and abuse; (4). Defining the role of the educational staff in relation to the students' maladjusted sexual-social behaviours; (5). Development of ways to cope with various situations that may arise in daily school life.

In terms of outcomes, students are expected to be able to accomplish the following at the end of the course: detect and respond professionally to inappropriate sexual behaviour in the classroom and the school, conduct a discussion with the students on topics related to sexuality education, and integrate topics related to sexuality education in the personal and class curriculum. The SHE training program consisted of 15 ninety-minute lessons, with each lesson dedicated to a specific topic including: The concept of sexuality; attitudes to human sexuality; Human sexuality and disabilities: clarifying attitudes and sexual rights; Sexuality education: the PLISSIT model; Psycho-sexual development and education;

Characteristics of psycho-sexual development of students with special needs; Privacy and personal space; Social distances; The continuum of sexual behaviour; Sexual assault/abuse; The influence of the media on sexual development and behaviour; Addiction to sex; Detecting and identifying risk situations in the sexual-social realm; Discussing sexuality with parents.

The objective of the study was to quantitatively assess the impact of participating in an SHE training program for PST intending to teach in SE on knowledge, attitudes and capability of SE PST in relation to SHE training. The following hypotheses were formulated:

- Hypothesis 1. Following the participation in the SHE training, there will be an increase in knowledge of the PSTs from the experimental group on topics related to sexual health and to sexual health and disability, in comparison to the control group.

- Hypothesis 2. Following the participation in the SHE training, the PSTs' attitudes towards sexual health and disability in the experimental group will be more favourable as compared to the pre-test condition.

- Hypothesis 3. Following the participation in the SHE training, there will be an increase in the PSTs' capability to teach SHE in SE as compared to the pre-test condition.

3. Research Methodology

Participants

Participants to this study were 179 Israeli SE pre-service teachers, who attended colleges and teaching seminars during academic year 2017-2018. All the participants were native Israelis, with Jewish religion orientation. The experimental group included 128 students who intended to take part in an SHE training course later on in the academic year. The control group included 51 students, who were not intending to take part in this course. Overall, in the study participated 170 females (ages between 24 and 37; $M = 28.11$, $SD = 4.14$) and 9 males (ages 20 and 57, $M = 27.02$, $SD = 6.95$). No

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significant difference was found between the age range of males and females, $t(177) = .47$, $p = .638$. Due to the wide range in age among the males sample, we examine whether differences were found in the variance of the participant's age by gender, using Leven's test for equality of variance. No significant difference was found in the variance of age by gender ($F = 1.49$, $p = .224$)

Instruments

A package of questionnaires, i.e. KASHED (Knowledge and Attitudes to SHE and Disability), was individually distributed to the PSTs prior and after the SHE training program. The questionnaires consisted of six sections, as it follows: Section A included 11 demographic questions; section B included 4 questions relating to the participant's experience of SHE in adolescence; Section C included 11 questions addressing the current views on SHE in SE; section D included 17 questions related to knowledge of SHE topics, such as: anatomy and physiology of reproductive organs, abortions, sexual orientations and sexual violence; section E included 12 statements relating to attitudes about sexuality for people with disabilities which the PSTs were asked to score from 1-4 according to their level of agreement with the statements and finally section F included 16 statements about attitudes towards sexuality which the PSTs were asked to score from 1-5 according to their level of agreement with the statements. The KASHED package of questionnaires were assembled and adapted for usage in Hebrew language from the following validated questionnaires:

- *Brosch's Questionnaire* that assesses the Attitudes, Knowledge, and Willingness of Pre-service teachers of Education to deal with topics connected to Sex and Family Life Education as part of their teaching tasks (Brosch, 2007).

- *Reuth Open Door* – IFPA's (Israel Family Planning Association) Questionnaire: Attitudes about Sexuality for People with Disabilities (Porat, 2009).

- *Attitudes toward Sexuality Scale* (ATSS), Fisher, Davis, Yarber, & Davis (1988).

4. Results

No significant differences were found between the attitudes towards and knowledge of SHE topics in general

and SHE in SE in particular between the male and female participants in the study. There was a smaller change in knowledge and attitudes to sexuality between before and after the SHE training program amongst those participants who were already working in the SE sector than amongst the participants who were full time students. Before the SHE training, the participants who were married or in a relationship had significantly more positive attitudes towards sexuality and sexuality and disability compared to those that were single. However, whether the students had children or not, did not have an impact either upon knowledge and attitudes to sexuality and disability before the course, neither after the course.

Before the SHE training, significantly lower levels of knowledge on SHE topics were found amongst participants defining themselves as being religiously observant, than amongst those defining themselves as either traditional or secular. The attitudes about sexuality were also found to be more negative among those defining themselves as religiously observant before the SHE training. There was a significant increase in knowledge of SHE topics amongst the religiously observant students after the training, compared to those that were not defining themselves as religiously observant.

A positive correlation was found between the level of sexual knowledge and the attitudes towards sexuality and the age of the participants, $r(177) = .41$, $p = .000$ and $r(177) = .25$, $p = .001$, respectively), indicating that as the age of the participant increases, the level of sexual knowledge is higher and that there are more positive attitudes towards sexuality. No significant correlations were found between the parents' education and the year of the participant's college studies and levels of knowledge of SHE topics or attitudes to sexuality or to sexuality and disability.

Three multiple regression analyses were conducted in order to examine the contribution of the PST's background characteristics to their level of knowledge on topics related to SHE, the attitudes towards sexuality and disability and the attitudes towards sexuality *before the SHE training.* Three additional regression analyses were conducted in order to examine the contribution of the PST's background characteristic and the grouping variable to the level of knowledge on topics related to SHE, the attitudes towards sexuality and disability and the attitudes towards sexuality *after the SHE training.* The independent variables were entered in a stepwise manner. The only variables that contributed significantly to the explained variance were entered into the equation.

Table no. 1. Results of multiple regressions for the knowledge in topics related to SHE, the attitudes towards sexuality and disability and the attitudes towards sexuality in relation to the background characteristics of the PST before the SHE training

Dependent variables	Steps	Independent variables	*B*	*SE.B*	*β*	*t*	*R²*	*ΔR²*
Level of knowledge	1	Religious	-1.36	.24	-.41	-5.68***	.172***	.172***
Attitudes to sexuality and disability	1	Marital status	.19	.07	.21	2.66**	.044**	.044**
Attitudes towards sexuality	1	Religious	-.37	.05	-.52	-7.66***	.275***	.275***
	2	Religious	-.33	.05	-.47	-6.65***		
		Age	.01	.01	.16	2.25*	.298***	.023*
	3	Religious	-.29	.05	-.41	-5.53***		
		Age	.03	.01	.30	3.19**		
		Children	-.28	.13	-.20	-2.24*	.320***	.022*
	4	Religious	-.29	.05	-.41	-5.57***		
		Age	.03	.01	.29	3.13**		
		Children	-.42	.14	-.29	-2.94**		
		Marital status	.21	.11	.17	2.01*	.338***	.018*

*p < .05, **p < .01, ***p < .001

The level of self-perceived religiousness (or religiosity) contributed significantly to the explained variance (EPV) of the knowledge on topics related to SHE and the attitudes towards sexuality before the SHE training (17.2% and 27.5%, respectively, table no. 2). The negative β coefficient indicated that the knowledge on topics related to sexual education was greater and the attitudes towards sexuality were more positive among secular PSTs compared to religious PSTs at this time point.

The marital status contributed significantly to the EPV of the attitudes towards sexuality and disability and the attitudes towards sexuality before the SHE training.

The positive β coefficient indicated that the attitudes towards sexuality and disability and the attitudes towards sexuality were more positive among married PSTs or those with a stable partner compared to single or divorced PSTs.

The age of the PSTs contributed significantly to the EPV of the attitudes towards sexuality before the intervention with a positive β coefficient, indicating that as the age increases, the attitudes towards sexuality become more positive. Finally, the negative β coefficient of the "children" variable indicated that PSTs without children had a more positive attitude towards sexuality compared to PSTs with children.

Table no. 2. Results of multiple regressions for knowledge of topics related to SHE, the attitudes towards sexuality and disability and the attitudes towards sexuality in relation to the background characteristics of the PSTs after the SHE training

Dependent variables	Steps	Independent variables	B	$SE.B$	$β$	t	R^2	$ΔR^2$
Sexual knowledge	1	**Group**	2.11	.42	.37	5.03***	.140***	.140***
Attitudes to sexuality and disability	1	**Group**	.57	.07	.53	7.81***	.283***	.283***
	2	**Group**	.55	.07	.51	7.50***		
		Marital status	.13	.06	.14	1.99*	.301***	.018*
Attitudes towards sexuality	1	**Religious**	-.28	.05	-.40	-5.43***	.160***	.160***
	2	**Religious**	-.27	.05	-.38	-5.44***		
		Group	.47	.10	.32	4.58***	.261***	.101***

*$p < .05$, **$p < .01$, ***$p < .001$

Participation in the SHE training program (the experimental group) had a significant effect on the knowledge of SHE topics of the PSTs from all the different backgrounds (table no. 3). Furthermore, the positive β coefficient indicates that amongst the PSTs who had participated in the course (experiment group) the knowledge on topics related to SHE was greater amongst secular PSTs than amongst the religious PSTs. Likewise, attitudes towards sexuality and disability and the attitudes towards sexuality were more positive among secular PSTs who had been enrolled in the SHE training program

compared to PSTs who did not enrol in the SHE training program.

Compared to the results of the regression analyses before the SHE training, the marital status of the PTSs significantly contributed to the EPV of the attitudes towards sexuality and disability. The positive β coefficient indicated that the attitudes towards sexuality and disability after participating in the SHE training program were more favourable among married PSTs or those with a stable partner as compared to single or divorced PSTs.

Moreover, compared to the results of the regression analyses before the course had been delivered, the level of self-perceived religiousness of the PSTs significantly contributed to the EPV of the attitudes towards sexuality. The negative β coefficient indicated that the attitudes towards sexuality were more favourable among secular PST's compared to religious PST's after the SHE training program. The experimental group was found to have significantly higher levels of knowledge of SHE topics after participating in the SHE training ($M = 9.11$, $SD = 2.19$) in the experimental group than the control group ($M = 7.18$, $SD = 3.00$), $t(177) = 4.78$, $p < .000$. Participation in the training course also impacted upon the attitudes of the PSTs to a wide variety of issues including whether people with a disability have the same sexual needs as those without a disability; whether everyone has the right to exercise his or her sexual potential regardless of their physical or mental condition; whether people with a disability have the same libido as those without a disability; whether people with a disability should have more important issues to see to than sexual relations and finally whether sex is good only if you can "go all the way".

5. Discussions

The research findings show that the Israeli pre-service teachers who participated in the SHE training course increased their knowledge in topics related to SHE in general and SHE in Special Education in particular. These findings support the literature indicating that training courses preparing teachers to deliver SHE in SE are needed (Daciuk, 2015; Lapidot-Berman & Firstater, 2018). They also show that certain background characteristics, such as gender and religious observance, may influence the knowledge of topics related to SHE, as well as the level of favourability of the attitudes to sexuality and to sexuality and disability. The results matched other studies that showed that levels of religiosity could impact the attitudes and knowledge related to SHE in Special Education (Apteslis, 2019; Sheridan, 2016).

The innovative curricula of this SHE course was associated with several positive outcomes on the Israeli PSTs who participated in the course, such as increase in their knowledge in topics related to SHE in general and SHE in the SE population and increase in the level of favourable attitudes to SHE in general and SHE in SE in particular. The most significant change in attitudes after

participating in the SHE course was related to the age from which SHE should be taught. After participating in the SHE training program, the majority of PSTs thought that SHE should start at early stages of development, such as kindergarten. Also, the majority of PSTs who participated in the SHE training program (around 80%) indicated that they feel willing and capable to teach SHE to special needs persons.

In terms of identified limits, although the study was conducted in four different teacher-training colleges in Israel, the population of the current study included only Jewish students. It is hoped that future studies will include a more diverse population. Israel is a multicultural country and a study population including ethnic minorities and recent immigrants could have made an interesting study. More diverse samples may yield other important findings relating to cultural and other important variables. Further research can also explore, as part of the demographic background, whether the teachers had friends or family members with disabilities and how this affects their attitudes and capability to teach SHE in the field of Special Education.

6. Conclusions

The fact that knowledge and attitudes toward sexuality and sexuality and disability were changed significantly by the participation in the Sexual Health Education training program in Special Education, on the one hand underlined the prevalent lack of knowledge and less favourable attitudes to sexuality of people with disabilities, but on the other hand supported the idea that participation in a specially designed training course can significantly change in a positive direction the levels of preparedness of pre-service teachers to teach Sexual Health Education for special needs students.

Authors note:

The authors have equal contributions to this article.

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Teachers' Perceptions about the Social Education of Young People in the Current Context of the Romanian School

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Teachers' Perceptions about the Social Education of Young People in the Current Context of the Romanian School

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Abstract

Keywords:
social education, social pedagogical program, strategies for socio-educational intervention

The article presents the results of a psycho-pedagogical study focused on the problem of social education in school, and on the identification of the perceptions of some teachers from the Romanian pre-university education regarding the knowing of the realities of the school life, of the manifestations of the risk behaviours in school and outside it, of the strategies and actions that can determine positive behavioural, attitudinal and/or operative changes, contributing to the formation and development of some individual and group behaviours that are desirable through formal or non-formal educational means. The article is a comprehensive synthesis of the evolutionary process of the social pedagogy paradigm across the world and within our country, and it invites to reflection on the identification of those effective modalities of socio-educational intervention in school in response to the pressing problems that the Romanian school faces today.

Zusammenfasung

Schlüsselworte:
Soziale Erziehung, sozial-pädagogisches Programm, sozio-erzieherische Interventionsstrategien

Der Artikel stellt die Ergebnisse eines psychopädagogischen Studiums dar, das sich auf die Problematik der sozialen Erziehung innerhalb der Schule bezieht, und auch auf die Identifizierung des Wahrnehmungsvermögens mancher Lehrkräfte aus dem rumänischen Unterrichtswesens, hinsichtlich der Erkenntnis der Realität im schulischen Leben, des Risikobenehmens innerhalb und auβerhalb der Schule und der Erkenntnis bestimmter Strategien und Handlungsmaβnahmen, die eine Umgestaltung in der Verhaltensweise, in der Stellungsnahme und/oder eine positive Handlungsweise bewirken können; durch diese Erkenntnis wird zur Ausbildung und Entwicklung von einer wünschenswerten Verhaltensweise-individuell und in Gruppen- durch formale und nonformale Erziehungsmittel beigetragen.Der Artikel beschreibt zusammenfassend den Entwicklungsprozess des Paradigmas der sozialen Pädagogie in der Welt und in unserem Land, somit wird man zur Überlegung aufgefortdert-was die Identifizierung jener konkreten Vorgehen zur sozio-erzieherischen Intervention in der Schule betrifft, als Antwort auf die dringenden Probleme, die heutzutage der rumänischen Schule gegennübergestellt werden.

1. Introduction

The school as a space for socializing, learning desirable behaviours, training/ developing key competences, as well as for experimentation and various exploratory endeavours contributes intentionally, systematically and voluntarily to the construction of the social identity of the youth, to affirming their autonomous and creative personality through the implicit values, attitudes and norms created in the classroom and beyond, through the daily interactions between students, between teachers and students, between teachers and parents or between teacher-students and representatives of the school and/ or of the local community. Through the diversity of socializing opportunities present in the class of students and at the school level and/or outside its walls, young people practise certain behaviours, are put into different situations and acquire skills of integration and

coexistence with others within the school community and society.

Cucoş (2017) considers that "morality and civics can be discussed in school, but they are formed or consolidated in real-life situations, through community action and interaction. One must conceive formative instances so as to continue, to enhance and to stimulate the emergence of new types of youth's skills" (p. 112). Therefore, the essential task of the school is not only to provide young people with information and knowledge from various fields of interest and to teach them skills, abilities, habits and competences but, above all, to prepare the youth for life in society. In the opinion of Professor Păun (2017), "…school cannot function solely in the paradigm of responses to social demands. It must influence and cause changes at the societal level, play an active role in this regard." (p. 119).

But how can school influence and determine these changes at the societal level? Hämäläinen (2003) believes that social pedagogy can decisively influence social circumstances and that social change can be induced. Moreover, Thiersch (2005) considers that social pedagogy, acting as a third socializing setting, after family and school, involves a certain amount of work of social education and social networking. According to Lorentz (1994), social pedagogy represents "that program of emancipation for the self-directed learning processes inside and outside the education system acting for the transformation of society" (p. 93).

Therefore, through its actions of local and community intervention, social pedagogy has the force to act systematically on individuals, morals and, ultimately, on social culture, thus contributing to social change.

2. Theoretical foundation

The evolutionary process of the social pedagogy paradigm is axiomatically based on the fact that education has become a permanent dimension of social life. The history of pedagogy reveals a gallery of well-known philosophers and educators (Plato, Aristotle, Comenius, Pestalozzi, Diesterweg, Fröbel, Mager, Willmann, Natorp, Barth, Kerschensteiner, Durkheim, Dewey, Nohl et al.) who expressed their belief that education has always been social in nature. These representatives of social pedagogy gave priority to the social factor in education and emphasized the role of society in the development of the human being in relation to educational purposes: preparing the individual for his/her social integration and for an active life within society. The need for social education carried out outside the two institutions dedicated to education (school and family) was also pointed out and the role of social values as higher educational values was further emphasized.

Today, the paradigm of social pedagogy is exploited in the community of educational practices around the world under the most diverse activities: from socio-educational support to young people or adults (assisted at home or in care centres) to activities with delinquents (young offenders/adults), from the activities of play and occupational therapists to the activities of community development (Neacşu, 2011).

Hämäläinen (2003) argues that there are two ways in the development of social pedagogy: on the one hand, the tradition of theoretical discussions and, on the other hand, the tradition of practical activities that are based on creative work styles, community orientation and experience orientation. Eriksson and Markström (2003) describe social pedagogy as being supported by three pillars: raising and educating children to become citizens, animating in the sense of social mobilization through community activity and emancipation of groups, the process of analysing and solving social case studies following the American tradition of social work. We deduce from here that social pedagogy is supported by the family, the school and the community in its program of social-civic literacy, of investigation and settlement of certain problems specific to different groups and communities, of responsible participation in the community decision-making and, finally, of training/development of the social-civic competences of young people. Kiriacou (2009) identifies 5 dimensions of social pedagogy in school as a program that offers an integrated approach to the needs of the child in terms of care and well-being, inclusion, socialization, support in learning and social education. Social pedagogy is both a field of practice and a field of inquiry that crosses disciplines such as social work, education, community development and psychology.

In Romania as well there is a tradition of establishing the paradigm of social pedagogy through the socio-pedagogical contributions of Constantin Dimitrescu-Iaşi, Spiru Haret, C. Rădulescu Motru, Dimitrie Gusti, Petre Andrei, I.C. Petrescu, S. Stoian et.al.

According to some contemporary Romanian educators (Neacşu, 2010), social pedagogy is a discipline with a pronounced practical-applicative character that has the "vocation of proven interdisciplinarity" and which builds its methodological arsenal by exploring "the substance of the fertile fields, deriving from the concepts, the logic of the problems and the mechanisms of some disciplines, such as: education sciences, psychology, social psychology, neurobiology, neuroscience, communication pedagogy, group therapies, volunteer group methodology, medical pedagogy." (p. 14).

Ilica (2009) distinguishes between social pedagogy, considered as "field of education sciences, dealing with adult education, lifelong education and the education carried out by society in its favour" (p. 199), and social education, which is to be defined as "influence of the society on each member" (p. 202). According to Bocoş (2016), social education represents "that type of education

that aims mainly to ensure the function of socialization, by transferring values, cultural models, civilization elements, norms and rules from society to the individual, within a constructive process, which builds skills, attitudes and competences necessary for social integration" (p. 69). Ștefan (2006) describes social education as "orientation of the current pedagogical action, which aims to instill in children the spirit of cooperation, of respect and mutual aid, social solidarity. It is a democratic orientation, with emphasis on the decisions taken through group discussion, on responsibility in fulfilling social tasks, on involvement in community actions" (pp. 114-115). Moreover, Albu (2009) calls for reflection, under the form of social pedagogy essays, on the pressing problems of education in the "hypermodern society: school and its new dilemmas, education and television, suburb culture, education and hyperconsumer society, the teacher and the hypermodern society".

A series of manifestations of public and/ or private institutions and bodies in our country, as well as of individuals can be integrated into the concept of social education, in the sense that these direct/indirect, conscious/ unconscious actions at some point cause changes in the behaviours of individuals in a society (Neacşu, 2011). Examples of good practices come mainly from the sphere of private non-governmental initiatives: the projects of the Pestalozzi Romania Foundation for the assertion of the profession of social educationist in our country, the intercultural and civic education projects of the Timisoara Intercultural Institute, the activities of training young people in a democratic spirit performed by the Prahova Social Education Association and the Association of Social Educators in Cheia, Târgu-Mureş.

On the educational level, there are more initiatives to promote social education in the school. On the one hand, the introduction in the compulsory secondary school curriculum, starting with the 2017-2018 school year, of the *Social Education* subject which encompasses the following: in the 5th grade – *Critical Thinking and Children' Rights*, in the 6th grade – *Intercultural Education*, in the 7th grade – *Education for Democratic Citizenship*, in the 8th grade – *Economic-Financial Education*. On the other hand, a continuity in the teaching of *Civic Education* in primary school (3rd and 4th grades) and of *Civic Culture* in secondary school (7th and 8th grades) doubled by curricular modernization through the introduction of digital textbooks to study these school

subjects in the knowledge-based society. At the same time, the curricular offer that is decided upon by the school includes new optional subjects related to the curricular area *Man and Society*, for example: *Prepared for life. Education for Life and Community, Character Comes First, Legal Education, Education for Society, European Education*.

Social education proves its effectiveness if it is supported by a school environment in which students are given the opportunity to experience the values and principles of the democratic process in action. This is also supported by current educational policy documents that underline the fact that "successful school experiences provide students with the opportunity to reach their potential and prepare them to play a key role as active and responsible citizens." (Action Plan for Education, 2019-2030, p. 16)

3. Research methodology

The matter of social education and the analysis of the concrete ways of achieving it in school directed our investigative approach towards a confirmatory study realized between February and March 2019 in order to probe the perceptions of some pre-university teachers from Argeş on the knowledge of school-life realities, of manifestations of risk behaviours in and outside school, of socio-educational strategies and actions that can cause positive behavioural, attitudinal and/or action changes, contributing to the formation and development of desirable individual and group behaviours through educational, formal and/or non-formal, means.

The objectives of the study were aimed at:

✓ knowing the importance given by the teachers questioned to the factors of social education;
✓ identifying those socio-educational strategies necessary in the application of the current social education curriculum that facilitates the daily practice/respect of social-human values and the creative transfer of these values in other life situations;
✓ identifying strategies for preventing/ reducing/ modifying aggressive behaviours in schools.

The study was built on a questionnaire-based survey, the questionnaire being applied to 60 teachers from the Argeş county who teach *Civic Education* in the primary cycle (30) and *Social Education/ Civic Culture* in the

secondary cycle (30). Descriptive statistical analysis and cross-table analysis were used as statistical tools. The participants in the study were predominantly female teachers (86.5%), while the male gender representatives had a weight of only 13.5%. Most of the teachers (75%) surveyed have the Teacher certification – level 1, 11.5% have the Teacher certification – level 2, 9.6% have the permanent teacher certification and only 3.8% are beginners in the profession. Regarding their seniority in the school institution, 48.3% have served over 19 years, 13.3% have served between 9 and 13 years, 11.7% have served between 14 and 19 years, 11.7% have served between 3 and 8 years, and only 1.9% have a short seniority, under 2 years.

4. Results

At Question Q1., *"In general, to what extent do you face problems such as those indicated below at the level of the class or school you are working in?"*, the teachers questioned mentioned that they face the following problems to a high degree at the classroom or school level:

a. poor children at the level of the family of origin/standards below the socially accepted limit *(the problem of poverty)*;
b. undisciplined children in relation to the rules of the school regulation, of the student status *(the problem of lack of school discipline)*;
c. violent children in the classroom, outside the classroom, on the street, in other environments *(the problem of violence)*;
d. children neglected by their parents and children who drop out of school without a written motivation from their parents *(the problem of child neglect and school dropout)*.

The multitude of problems that teachers face as a result of poverty, lack of discipline, increased acts of violence in school, the proliferation of addictive behaviours and the increase of school dropout cases are reasons why teachers need help in the efficient management of complex problems related to the youth personality shaping and development. The most important factors for the social education of young people which were mentioned by the participants in the study are, in order: family factors (45.0%), community-related/reference group-related factors (35.1%), environmental factors (28.3%), factors related to their own personality/immaturity, weak will, strong demotivation (18.6%), and school factors/excessive authority, very high standards (18.3%). Poverty and lack of access to education and social protection services that children and their families face are known to negatively impact the former's school attendance.

The teachers participating in the study were asked to what extent the current school curriculum of Civic Education and/or Social Education reflects the fundamental human values and the respondents mentioned that the following general-human values are addressed the most in the current school curriculum: justice, solidarity, the good, education/training, culture and civilization, the beautiful, recognition of the right to play, work, education and creation, truth/knowledge, compliance with the truth, tolerance and flexibility, faith, freedom of expression, freedom of communication and individual, social, and group security. Those that are reflected to a lesser extent than those mentioned above are: the self-achievement of the personal project, the existence and quality of the satisfaction of the primary needs, health, protection, social assistance, family/group life and individual dignity.

At the question *"To what extent do the strategies below facilitate the correct knowledge and understanding of human values?"*, the participants in the study considered that the following strategies (figure no. 1) greatly facilitate the correct knowledge and understanding of human values.

Figure no. 1. Hierarchy of the strategies that facilitate to the highest degree the correct understanding of human values

For female teachers, the most important strategies are: experiential learning strategies, strategies for inducing and assuming responsible attitude and strategies for behavioural and attitudinal-value change.

Table no. 1. Hierarchy of the strategies that most facilitate the correct understanding of human values function of gender

Strategies that facilitate to the highest degree the correct knowledge and understanding of human values	Male	Female
1. strategies of inducing and assuming responsible attitude	71,4%	65,9%
2. strategies of experiential learning	57,1%	68,9%
3. strategies of behavioral and attitudinal-value change	57,1%	62,2%

The didactic degree or seniority in the school institution does not significantly influence the ranking of strategies that facilitate the correct knowledge and understanding of human values.

At the question *"To what extent do the strategies below facilitate the daily practice of and compliance with the social-human values?"*, according to the respondents, all the strategies mentioned facilitate to a high degree the daily practice and respect of human values, but they can also be classified according to the importance given (figure no. 2).
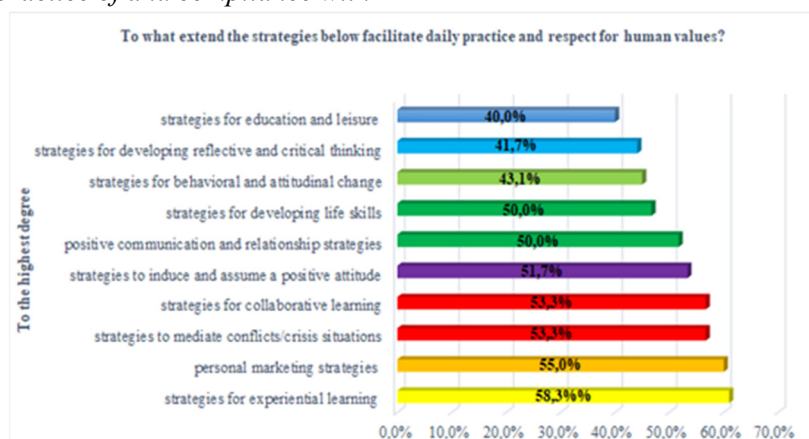

Figure no. 2. Hierarchy of the strategies that facilitate to the highest degree the daily practice of and compliance with the social-human values

While male teachers consider that the most important are the strategies that mediate conflicts/crisis situations in the school space, followed by experiential learning strategies and collaborative learning strategies, female teachers focus on experiential learning strategies and, just like the male teachers, on strategies for collaborative learning, followed by strategies for mediating conflicts/crisis situations in the school space. The didactic degree or the seniority in the school institution does not put a significant imprint on the ranking of the strategies that facilitate the daily practice of and compliance with socio-human values.

Table no. 2. Hierarchy of the strategies that facilitate to the highest degree the daily practice of and compliance with the social-human values function of gender

Hierarchy of the strategies that facilitate to the highest degree the daily practice of and compliance with the social-human values	Male	Female
1. strategies that mediate conflicts/crisis situations in the school space	71,4%	60%
2. experiential learning strategies	57,1%	66,7%
3. collaborative learning strategies	57,1%	62,2%

Moreover, the teachers participating in the study were questioned about the need to implement strategies to prevent/reduce/modify the aggressive behaviours in schools and the respondents consider that it is first necessary to implement the techniques of individual and group educational counselling (81.4%) followed by:

- involvement of children/young people in extracurricular projects (78%);
- focus groups with parents (71.2%);
- techniques for individual and group psychological counselling (69.5%);
- workshops for personal development of children/young people (69.5%);
- techniques for behavioral control and conflict mediation (67.8%);
- workshops for the emotional education of children/young people (66.7%);
- joint workshops for children-teachers-parents (65%);
- anti-violence campaigns (63.8%);
- involvement of children/young people in volunteering activities (59.3%);
- strategies for behavioural modification (50.8%);
- reconstructive techniques (43.1%).

5. Discussions

Many researchers and practitioners in the field of social pedagogy believe it is wrong to consider social pedagogy only a collection of strategies for socio-educational intervention, but rather it should be seen as a complex program at the meeting point between care and education. Naturally, we ask ourselves the following questions: *How should such a socio-educational program look like? Are our teachers ready to implement in schools such coherent programs of social pedagogy that respond to the pressing needs and problems of our schools today? What would the training of teachers entail in this regard? Is the existence of a social educationist in school that coordinates such socio-educational programs justified, or do the efforts of teachers combined with those of the parents, community representatives and members of the multidisciplinary team (school psychologist, school counsellor, school assistant, school doctor, medical nurse) suffice, if such staff exists in schools?*

The pressing problems faced by teachers today, to a large extent at the classroom and school level, are mainly related to poverty, lack of discipline, violence, neglect and school dropout. Specialized studies (Muntean, 2011, Neacşu, 2010) mention the multidimensional character of poverty which "affects the material state (food, housing, heat), the workplace, the mental well-being (induces annoyance, sadness, insecurity, shame, humility, hunger), creates inability to participate and represent at political level, as well as specific cultural and social norms. While the subculture theory links poverty to the initiation of violent and antisocial behaviours in certain social groups, newer research highlights an important aspect present in the groups exposed to poverty: human solidarity" (p. 130). Therefore, for the poor families there is a complex register of needs that have to be met in order to facilitate their children's access to education. However, there are certain

socio-economic barriers that reduce the chances of poor families sending their children to school.

School indiscipline, under its various manifestations, from the lack of respect for teachers and/or classmates, disobedience to the rules of the class or family, to inappropriate behaviour during school hours or threats and forms of violence (screams, fights, physical assault of colleagues or even of teachers) most often puts teachers in difficulty in efficiently managing the situations of indiscipline encountered in school practice. Therefore, teachers express the need to know and apply those methods and strategies suitable for reducing acts of indiscipline and the level of aggressive behaviour at school. Several studies and research on combating the phenomenon of violence in school show that bullying, harassment and verbal aggression against children are present at a worrying level in schools. In a statement issued by the Romanian Police in October 2018, it is shown that the average rate of offenses reported in schools at county level is 0.59, most of the violence is in fact represented by consequences of spontaneous conflicts arising from trivial quarrels between children, and the crime rate committed in school is almost twice as high in urban areas as in rural areas. Hitting and other types of violence represent 54.9% of the offenses reported in the last year of school. Therefore, it can be concluded that the tendency of children to respond violently is increasing, against the background of violence to which children are exposed in the family, in society, in the media or on the Internet.

Regarding child neglect, it is known that this negatively affects both the physical and psychological development of the child. The immediate psychological effects of neglecting the child are fear, isolation and inability to trust someone. Other psychological difficulties associated with neglect include depression, withdrawal, panic disorder, attention deficit hyperactivity disorder, anger, reactive attachment disorder, cognitive abilities, language development, educational acquisitions, and lower performance. Neglected children are more prone to antisocial behaviours, personality disorders and violent behaviour. Sometimes, neglect leads to taking on too many responsibilities: the responsibility of caring for younger siblings prevents the child from participating in activities appropriate to his or her age, like playing or having friends, and it may even reach the level of not going to school. The long-term psychological problems associated with neglect are also known: personality disorders, post-traumatic stress disorder, depression, anxiety disorders and even psychoses.

Early school leaving is a problematic issue at national level. The number of people leaving early the education system remains one of the highest in the EU, the rate of early school leaving being 16.4% in 2018 according to Eurostat. Children and adolescents from the most disadvantaged families, members of the Roma communities, those living in rural areas and children with disabilities have the least chance of graduating from compulsory education and continuing their education at a higher level. A research of the Institute of Education Sciences carried out in 2012 together with UNICEF Romania presents a hierarchy of family factors with negative impact on the school dropout of students: "income at the subsistence limit, low level of parents' education, family disorganized by divorce/death, single-parent family, reorganized family, temporary/permanent child in the care of grandparents/other relatives, unemployment situation for one or both parents, negative attitude of family members regarding the children's education/school, abandonment situations in the case of older siblings, the provision of lucrative activities in the household/outside it, the lack of minimum conditions for home study" (p. 62). It is also emphasized that the risk of school dropout "is most often associated with factors that are related either to the characteristics of the student (health status, level of intelligence, level of previous knowledge, specific attitudes and behaviours etc.) or to the socio-economic and cultural environment of the family of origin" (p. 65).

6. Conclusions

The study conducted led us to the following conclusions:

− The fundamental human values addressed and reflected to a great extent in the current Romanian school curriculum at primary and secondary level are: justice, solidarity, the good, education/training, culture and civilization, the beautiful, recognition of the right to play, work, education and creation, truth/knowledge, compliance with truth; tolerance and flexibility; faith; freedom of expression, freedom

of communication and individual, social and group security. To a lesser extent than those mentioned above are: self-achievement of the personal project; the existence and quality of the satisfaction of the primary needs; health, protection, social assistance; family/group life and individual dignity.

− Among the strategies that facilitate to a great extent the correct knowledge and understanding of human values are: experiential learning strategies, positive communication and relation strategies, behavioural and attitudinal-value change strategies, responsible attitude induction strategies, strategies for developing independent living skills, strategies for collaborative learning, partnership and/or volunteering, and strategies for education and leisure. The following strategies are very important, but to a lesser extent than those mentioned above: strategies for developing reflective and critical-constructive thinking, personal marketing strategies and strategies for mediating conflicts/crisis situations in the school space.

− Regarding the desirable social attitudes and behaviours, young people learn mainly from the hidden curriculum of the school, whose values shape and influence each aspect of the student's experience, as they participate daily in social processes in the classroom and school life, they learn from the nature of the social relations established at the level of the school organization, from the teacher-student interactions, from the way in which the colleagues and teachers relate, from observing or violating some internal norms of the class/school, from overcoming prejudices and stereotypes or not, from constraints and/or manifestations of authority/power, from the spirit of cooperation and existing aids, etc.

− Through the continuous training of teachers in the field of social pedagogy, specific competences can be developed, which will allow them to intervene from an educational and socio-emotional point of view in the prevention, correction and healthy modelling of the youth from the behavioural and behavioral-attitudinal point of view and, last but not least, to act in the spirit of social pedagogy as active agents of social change by initiating and implementing in the educational practice some operational programs of social pedagogy that respond to the socio-educational

problems identified at a given time in the school space and outside it.

Authors note:

The authors have equal contributions to this article.

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Associations Between Prosocial Behaviours, Gratitude, and Psychological Well-Being in Vulnerable Adolescents with Mild Intellectual Disabilities

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Associations Between Prosocial Behaviours, Gratitude, and Psychological Well-Being in Vulnerable Adolescents with Mild Intellectual Disabilities

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Abstract

Keywords:
prosocial behaviours, gratitude, well-being, adolescents, emotional problems, behaviour problems, problems with others.

The current research aims at exploring the associations between prosocial behaviours, psychological well-being and gratitude in a sample of adolescents identified as having problematic, challenging behaviours and mild intellectual disabilities. Various research results show that both gratitude and prosocial behaviours might have a significant role in the positive development in adolescents and adults. Using measures adapted on the Romanian population and some adapted for the current study, we collected data from a sample of 30 vulnerable, clinically healthy adolescents, enrolled in a special vocational school. We found low levels of gratitude and psychological well-being in our sample, as well as higher levels of emotional problems in girls compared to boys. Our results show that prosocial behaviours are significantly associated with lower peer problems, while prosocial behaviours and gratitude have a close to significance interaction effect on adolescents' well-being. Several possible implications both for research and clinical and educational practices in the service of vulnerable adolescents are discussed.

Zusammenfasung

Schlüsselworte:
prosoziales Verhalten; Dankbarkeit; Wohlbefinden; Jugendliche; emotionale Probleme; Verhaltensprobleme; Probleme mit anderen

Die aktuelle Forschung zielt auf die Untersuchung der Assoziation zwischen prosozialem Verhalten, psychologischem Wohlbefinden und Dankbarkeit in einer Stichprobe von Jugendlichen mit problematischem, herausforderndem Verhalten und leichter geistigen Behinderung. Verschiedene Forschungsergebnisse zeigen, dass sowohl Dankbarkeit als auch prosoziales Verhalten eine bedeutende Rolle in der positiven Entwicklung von Jugendlichen und Erwachsenen haben können. Anhand von Messungen, die der rumänischen Bevölkerung und der aktuellen Forschung angepasst wurden, haben wir Daten aus einer Stichprobe von 30 anfälligen, klinisch gesunden Jugendlichen erhoben, die eine besondere Berufsschule besuchten. Wir haben niedrige Niveaus von Dankbarkeit und psychologischem Wohlbefinden in der Stichprobe gefunden, aber auch höhere Niveaus von emotionalen Problemen unter Mädchen im Vergleich zu Jungen. Unsere Ergebnisse zeigen, dass prosoziales Verhalten erheblich mit weniger Peer-Problemen assoziiert ist, während prosoziales Verhalten und Dankbarkeit einen nahezu signifikanten Interaktionseffekt auf das Wohlbefinden der Jugendlichen haben. Einige mögliche Implikationen sowohl für die Forschung als auch für klinische und erzieherische Vorgehensweisen zu Gunsten der anfälligen Jugendlichen werden diskutiert.

1. Introduction

Historically, the positive psychology movement was a critique to the traditional perspective on human functioning, dominated by the biomedical model. The main purpose of positive psychology was to change the focus of professionals from the vulnerabilities to the qualities of human beings (Seligman & Csikszentmihalyi, 2000). According to Seligman (2002), after the Second World War psychology became a science dedicated to a large extent to healing rather than prevention of illness. Several human forces and qualities can act as buffers against psychiatric illnesses: courage, optimism, interpersonal skills, faith, work ethics, hope, honesty, persistence, flow and understanding. Prevention means,

to a large extent, finding ways to encourage these qualities in young population.

Various changes occur and are related to both psychological well-being and mental health in adolescence. Emotional, behavioural, social and communication changes are described during development in adolescence and various factors facilitate this process and protect the adolescent during this period, while other factors determine vulnerabilities in one or more areas of their life. Adolescence is a critical developmental period for mental and physical health risks, many symptoms of psychiatric illnesses become obvious at this vulnerable age, while the interest of health providers on adolescence is not enough (World Health

Organization, 2019). Because various risks are prevalent during adolescence, this period is very important for prevention through healthy models and interventions, in order to eliminate the negative consequences of negative and risky behaviours on the adolescents' health and well-being (Call, Riedel, Hein, McLoyd, Petersen, & Kipke, 2002).

2. Theoretical foundation

2.1. Prosocial behaviours

According to Fehr & Fischbacher (2003), one of the most important differences that distinguish humans from other species are the abilities to help, cooperate and show altruism. Prosocial behaviours are defined as a large array of behaviours that produce benefits to others. Though individually costly, prosocial behaviours facilitate cooperation and are essential in human interaction (Yost-Dubrow & Dunham, 2018). In the literature, these behaviours are characterized by: (1) actions that have beneficial effects on others; (2) specific forms of motivations that determine behaviours that contribute to others' well-being (Batson, Ahmad, Lishner, & Tsang, 2002, in Szentagotai-Tătar & David, (coord.), 2017).

Early adolescence represents an important stage in the development of prosocial behaviours, as the opportunities for engagement in social activities, such as volunteering in organizations, that involve prosocial behaviours become more available (Fabes, Carlo, Kupanoff, Liable, 1999). The level of parental prosocial behaviours is positively related to the level of prosocial behaviours in children. Parental modelling of prosocial behaviours and the use of inductive discipline (the replacement of negative behaviours with more positive ones, in agreement with social norms, by understanding the consequences of inappropriate behaviours) are more efficient than assertive discipline, characterized by the use of authority and power in a positive manner (Eisenberg & Fabes; 1998, Toiu-Ruiu, 2017). In some circumstances, the school environment and peer group hold significant influence on the adolescents' prosocial behaviour (Eisenberg & Fabes, 1998).

Though the main purpose of prosocial behaviours is the well-being of others, several studies support the idea that they have beneficial effects on the person that performs them, both at mental and physical levels, on well-being and mental health (Szentagotai-Tătar & David, (coord.), 2017). The mechanisms underlying this association are unclear, but one plausible explanation is the association of prosocial behaviours with positive emotions. Prosocial behaviours are associated with higher levels of gratitude, satisfaction, with lower mortality and morbidity (Szentagotai-Tătar & David, (coord.), 2017), better psychological health (ex., lower levels of depression and anxiety).

2.2. Gratitude

Conceptualized both as personality trait and emotional state, as character strength and general attitude toward life (Emmons, 2007), gratitude implies being thankful for a gift of benefit offered by another person, destiny, God or other entity. Though a variety of experiences can be associated with gratitude, it is derived rather from the perception of a personal positive result, not necessarily earned or gained, due to the actions of another person (McCullough, Kimeldorf, & Cohen, 2008). Fitzgerald (1998) identified three components of gratitude: 1) an honest feeling of appreciation for somebody or something; 2) a feeling of goodwill towards that person or thing; 3) a willingness to act, deriving from appreciation and goodwill.

Gratitude can be considered a moral emotion, because it has moral consequences and antecedents, originates and is manifested in prosocial acts (McCullough, Kilpatrick, Emmons, & Larson, 2001). McCullough et al. (2001) developed the Theory of Moral Affect, that defines the moral functions of gratitude on three levels: (1) gratitude as moral barometer – the personal perception as beneficiary of a moral action performed by somebody else; (2) moral motive/ antecedent – the encouragement of others to engage in moral, prosocial behaviours, after they have been the beneficiaries of others' prosocial behaviours; (3) moral reinforcement – the perception of gratitude in the other as reinforcer for the moral, prosocial behaviours.

The capacity to be grateful is one of the strong points of an individual that can improve both the physical and the psychological health (Snyder & McCullough, 2000). In support for this idea, Emmons & McCullough (2003) found that daily thoughts of gratitude ("counting the blessings") for several weeks can significantly improve people's health and well-being.

Gratitude holds a role in motivating and reinforcing prosocial behaviour (Yost-Dubrow & Dunham, 2018), by channeling positive emotions in prosocial behaviours and

propagating actions made on behalf of others' well-being in communities (McCullough, Kimeldorf, & Cohen, 2008). Also, the authors found a significant association between trait gratitude, generosity and trust in adults.

Graham (1988) and Peterson & Stewart (1996), cited by McCullough, Kimeldorf, & Cohen (2008) found that people who feel gratitude after a benefit have more chances to help both the benefactor and other persons and are more often engaging in prosocial behaviours than persons who feel gratitude less often. More grateful persons are less susceptible to engage in hostile, destructive behaviours, and gratitude is a factor that emphasizes prosocial behaviours, as well as a buffer against undesirable behaviours (Bartlett & DeSteno, 2006). The purpose of gratitude is to stimulate prosocial acts toward a beneficiary, despite the costs of these acts (the action can be repetitive, unpleasant, tiring), to foster better, though frustrating decisions, that imply the postponement of rewards (DeSteno, Li, Dickens, & Lerner, 2014), the so called delayed gratification.

2.3. Psychological well-being

In psychological research, various conceptualizations of psychological well-being are encountered, but none of them are exhaustive approaches. Two approaches are prevalent: (1) subjective well-being, emphasizing the need for happiness and pleasure, the presence of positive affect and absence of negative affect (hedonic well-being) and (2) psychological well-being, centered on a person's potential, emphasizing the need for full satisfaction in life (eudaimonic well-being) (Ryff & Keyes, 1995; Keyes, Shmotkin & Ryff, 2002, in Miron, 2011). Subjective well-being was associated with the experience of pleasure in real life situations, derived not only from physical hedonism, but also from the fulfillment of goals and results in various domains (Diener et al., 1998, in Ryan & Deci, 2001). Psychological well-being is derived from the actualization of full potential, of own qualities and virtues, of true nature. The eudaimonic well-being calls for the implementation of deep values in daily life activities (Waterman, Schwartz, Goldbacher, Green, Miller, Philip, 1993). The two concepts share a common base, but also some specific features and, therefore, should be analyzed separately.

Persons that demonstrate higher levels of gratitude tend to also experience higher levels of subjective well-being, satisfaction, happiness and life satisfaction (Watkins, Woodward, Stone, & Kolts, 2003). Grateful

people enjoy life, reach higher levels of well-being, acknowledge more easily gifts and appreciate the people that made them.

Results from research that investigated the association between gratitude and well-being show that groups involved in performing gratitude exercises (ex., counting the blessings, naming things to be grateful for) have an increased good mood and well-being, compared with controls (Watkins et al., 2003). Moreover, there is evidence that these exercises have long term positive effects on well-being (6 months after treatment), lead to higher positive affect, lower negative effects and better life satisfaction (Seligman, Steen, Park, & Peterson, 2005).

The association between prosocial behaviours and well-being has been documented in several studies and prosocial behaviours offer the highest emotional rewards when they facilitate social interactions (Dunn, Aknin, & Norton, 2014). Prosocial behaviours are more likely to promote well-being when they are motivated by altruistic, rather than egoistic reasons. Other two factors that increase the benefits of prosocial behaviours are will and impact. When people feel forced to perform prosocial acts, they are not interpreted as beneficial to well-being (Weinstein & Ryan, 2010).

Gender differences were identified regarding gratitude, subjective well-being and prosocial behaviour. Girls show higher gratitude than boys (Gordon, Musher-Eizenman, Holub, Dalrymple, 2004; Kashdan & Silvia, 2009) and tend to have higher social benefits when grateful. Also, Eisenberg, Fabes, Miller, Fultz, Mathy, Shell, Reno (1989) reported that prosocial acts are more frequent in girls than in boys.

Very few studies investigated the nature of gratitude in adolescence and most research is focused on adult populations. Adolescents with intellectual disabilities were rarely included in research regarding gratitude, although they can be agents of gratitude (Gaventa, 2013). In agreement to previous research, our aim was to investigate the relationship between gratitude, prosocial behaviour and psychological health and well-being in vulnerable adolescents with mild intellectual disabilities, enrolled in special education programs. Gender differences in all these characteristics will be investigated.

3. Research methodology

3.1. Participants

The initial sample included 41 vulnerable adolescents from a special school for mild intellectual disabilities with associated behavioural problems (various forms of aggressive behaviours, challenging oppositional problems, impulsivity etc.), aged 14 to 18 years (table no. 2), and most of the participants were 17 years old, with a mean age of 16.6 years. The selection criteria were developmental stage (age range corresponding to the adolescence period) and the presence of associated vulnerabilities (mild intellectual disability with disruptive, challenging behaviours). Other factors, such as academic results, did not constitute exclusion criteria. All the participants came from socially deprived environments, with low social-economic status, and none of them had a psychiatric diagnostic besides the identified challenging behavioural problems. Out of the 41 adolescents, 11 were eliminated from the study, on the grounds of the multiple missing values in the data collected from them, as well as the superficial approach in the completion of the questionnaires. Most of the teenagers were enrolled in the ninth grade (30%) and tenth grade (56.7%), in various programs offering vocational training to help them learn a profession and reach a level of social insertion according to their skills and intellectual capacities.

3.2. Instruments and procedure

The level of self-perceived difficulties and emotional and behavioural capacities was assessed using the *Strengths and Difficulties Questionnaire* (*SDQ*, Goodman, 2010, adapted for the Romanian population by Mateescu, Dobrean, Coposescu, Hofman, Muntean, Bogathy, 2014). The instrument has five subscales, each with 5 items, assessing emotional problems, conduct problems, hyperactivity, problems with others and prosocial behaviour. Each item is rated with a score ranging from "Not true" (0), to "Somewhat true" (1), and "Certainly true" (2). Although the questionnaire was developed for the age range of 11 to 17 years, we considered that it would be appropriate for the current study due to the presence of mild intellectual disability in our population of adolescents.

The assessment of the level of adolescents' well-being was performed using the *Adolescent Well-Being Scale* (*AWBS*, Birleson, 1981), an instrument derived from the

Depression Self-rating Scale for Children and it assesses the risk of depressive symptoms in older children and adolescents, aged 11 to 16 years. The questionnaire includes 18 items, each referring to different aspects of a teenager's life and the way in which they feel about it. The teenagers are asked to assess whether the statement applies to them "most of the time" (0), "sometimes" (1) or "never" (2). In our study, higher scores indicate higher risk of depressive symptoms. The authors found a cut-off score of 13 points for the risk of depressive symptoms in adolescents, but other sources of information are necessary in order to make a diagnosis.

The level of gratitude was assessed using The *Gratitude Questionnaire-Six Item Form* (*GQ-6*, McCullough, Emmons, & Tsang, 2002). The questionnaire is a self-report measure, used to assess the individual differences in gratitude in everyday life. The participants rated their answers to each item on a 7-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree). The short measure of gratitude is one of the most often used measure of gratitude in research on young populations, college students (ex., McCullough, Emmons, & Tsang, 2002) and high school students (ex., Chen & Kee, 2008), healthy populations or clinical samples (ex., Kashdan, Uswatte, & Julian, 2006).

All measures were given to the teenagers in a written format and they completed them in the presence of the second author, in small groups, in a paper and pencil form. Some participants needed small amount of guidance in completing the measures, and minimal support was given to them in order to understand the instructions, but the influence in answering was avoided. Due to the presence of the behavioural problems, several sessions were needed for the completion of the whole battery, as in most cases there was behavioural interference with the assessment (refusal of the material, aggressive approach of the examiner, leaving the desk, verbal comments etc.).

4. Results

4.1. Internal consistencies of the measures

All the instruments proved to have a weak internal consistency and, therefore, we eliminated some of the items in several of the subscales (table no. 1), until the value of alpha Cronbach quotient improved, and the remaining values were close to acceptable. The possible explanation for the problems we encountered with some of the items could be the presence of the mild intellectual

disability, along with several cultural differences that impeded the decoding of the item meaning by the participants. Thus, some of the subscales, such as the Peer problems subscale from the SDQ, ended up with a very small number of items, a number too small for the subscale to be a reliable measure of the construct, so the results should be interpreted with caution. The items of

the subscale referred to heterogenous types of behaviours that reflected problems with peer group, so they could be hard to understand for the participants. We eliminated from the data analysis the Hyperactivity subscale because it had a very low internal consistency in our study group, and we could not improve the value of alpha Cronbach by eliminating items.

Table no. 1. Internal consistencies of the measures used in the study

Scale	Subscale	Alpha Cronbach	Eliminated items	Nr. of remaining items
SDQ	Emotional problems	.662	-	5
	Conduct problems	.528	22	4
	Peer problems	.637	6, 19, 23	2
	Prosocial	.780	-	5
AWBS		.677	3	16
GQ-6		.613	1	5

The remaining items in each of the subscales were summed to obtain the total scores. However, the construct operationalizations were modified, to correspond to the specific of our study, and the results obtained for the corresponding subscales are questionable and need further testing in other studies.

4.2. Levels of the adolescents' well-being, prosocial behaviors and gratitude

One interesting result was the level of well-being of the teenagers included in our research. Comparing the scores that we obtained with the cutoff score provided by the authors of the scale, we found a high level of risk for depression. Although we eliminated one of the items due to low Cronbach's Alpha value of the scale, the overall scores were close to 13, the cutoff score provided by the authors of the scale, as seen in their distribution presented in figure no. 1. A high number of adolescents from our study presented emotional problems, the female participants scoring significantly higher in emotional problems (table no. 2, figure no. 2). Also, the adolescents who reported higher overall difficulties in their life (as measured with the SDQ scale) also scored significantly higher in terms of emotional problems (table no. 2).
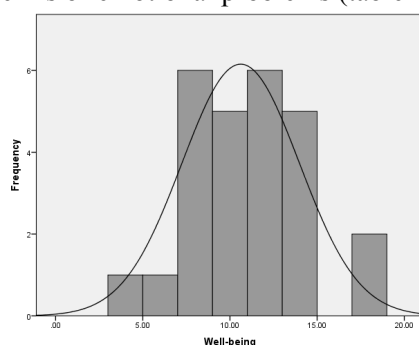
The interesting fact about our results was that our female participants scored significantly higher compared to male participants regarding their emotional problems. Although our sample was formed by vulnerable adolescents with behavioural difficulties, it seems that their reported scores for conduct problems are not very high, and are similar for boys and girls, while their level of emotional problems is much higher and similar to the scores that other authors found in clinical samples of teenagers, using the same measure we used, adapted for Romanian population of teenagers. Figure no. 2 also shows that a number of adolescents in our sample, mostly girls, reported levels of emotional problems that can raise concerns about their emotional state.
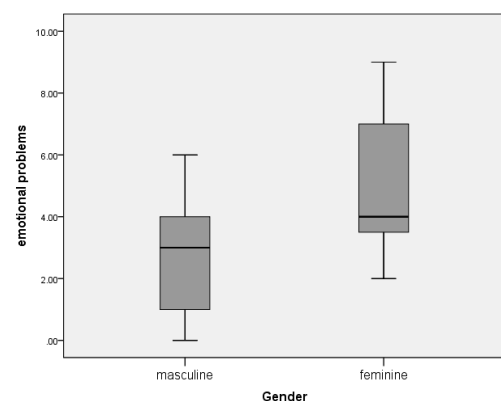
Figure no. 2. Comparison between the emotional problems scores of girls and boys

At the same time, the self-reported scores for prosocial behaviours were high, showing the tendency of the teenagers to have positive effects and do good to others, but at the same time their high vulnerability towards mental health problems, especially emotional vulnerabilities. Regarding the level of gratitude, we found

Figure no. 1. Distribution of the participants' scores for well-being

lower scores in our sample, compared to the scores reported by other authors on college students. We eliminated one item of the scale, in order to increase the internal consistency, but even so our average scores are much lower. Gils tended to show a slightly higher level of gratitude, compared to boys, but the differences were not statistically significant.

Table no. 2. Descriptives and scores obtained by the participants for the various measures

	Freq.		M(SD)					
			EmProbl	CondProbl	PeerProbl	Prosocial	AWBS	GQ-6
gender	male	56.67%	2.59(2.1)	3.76(1.9)	1.35(1.2)	7.24(2.3)	13.41(3.82)	18.06(5.9)
	female	43.33%	5.18(2.4)**	3.38(1.8)	1.54(1.1)	6.92(2.6)	12.84(3.99)	21.08(3.8)
difficulties	no	43.33%	2.54(2.2)	3.46(1.9)	1.69(1.4)	6.62(2.3)	13.46(3.9)	18.62(4.3)
	yes	56.66%	4.53(2.4)**	3.71(1.8)	1.24(.9)	7.47(2.4)	12.94(3.3)	19.94(6.0)

4.3. Correlations and complex associations between the characteristics

A high number of studies found significant associations between gratitude, prosocial behaviours and well-being in adolescents and adults, but we found no such associations in our study. The only significant negative association was between prosocial behaviours and peer problems (table no. 3), meaning that adolescents who show prosocial behaviours tend to have friends and be liked by their peers. Similar results were found by Caputi et al. (2012), who also reported significant changes in reducing peer rejection and increasing acceptance in teenagers who participate in programs that target the increase of prosocial behaviours.

Table no. 3. Correlations between reported problems, well-being and gratitude

Scale		1	2	3	4	5
EmProbl	r	.104				
	p	.599				
CondProbl	r	-.242	.251			
	p	.198	.197			
PeerProbl	r	.147	-.078	-.301		
	p	.439	.695	.106		
Prosocial	r	.014	-.087	.065	-.381*	
	p	.943	.658	.733	.038	
AWBS	r	-.170	-.296	-.116	.099	-.023
	p	.369	.126	.540	.601	.905

1 – GQ-6, 2 – EmProbl, 3 – CondProbl, 4 – PeerProbl, 5 – Prosocial, 6 – AWBS * Significant (p<.05)

Although a little below significant threshold, we found a moderation effect of gratitude and prosocial behaviour on the overall well-being in our sample of teenagers. Only 26 of the total number were included in the analysis, due to missing values. We used Process Macro for SPSS to conduct the analysis (Hayes, 2018). We found that the variation in overall well-being was partly accounted for by the interaction between the two variables included in our analysis: $R^2 = .29$, $F(3, 22) = 2.997$, p=.052. After adding the interaction term, a significant proportion of the variance in the dependent variable was found, $\Delta R^2 = .165$, $\Delta F(1, 22) = 5.13$, p<.05, b = -.11, t(22) = -2.26, p<.05. Although slightly below statistical significance, we decided to report the effect due to its possible clinical relevance. It seems that in our small sample of highly vulnerable adolescents, identified as having behavioural problems, we could find high levels of emotional problems, low level of well-being, equivalent with high risk for depressive symptoms, but few associations, contrary to what other authors reported, between emotional health, prosocial behaviours and gratitude. However, there can be a possible diminishing effect of the interaction between gratitude and prosocial behaviours on the level of risk for depression. This effect should be further tested, as our results were calculated on small samples, and the self-report instruments proved to have low internal consistency.

5. Discussions

Based on our data and results, we can conclude that in our vulnerable population of adolescents the association found by other authors between gratitude, psychological well-being and prosocial behaviours is not obvious. We found in our sample of adolescents, identified as having various challenging problematic behaviours in schools and outside of the school, high scores of emotional problems, similar to the ones reported by other authors on

clinical samples of adolescents who manifested suicidal ideation and attempts (Cotter et al., 2015), higher than scores found in adolescents with pathological use of internet (Strittmatter *et al.*, 2015) and high risk of depression, similar to the cutoff scores reported by the authors of the measure we used (Birleson, 1980). The scores of our participants for gratitude were much lower than the scores reported by other authors on samples of college students (ex., Chen, Chen, Kee, & Tsai, 2008, Kashdan & Breen, 2007 etc.). Studies examining these relations in adolescents are not that numerous, compared to research on adults, and populations of vulnerable adolescents are even less likely to be included in research. Consistent with research on adults, Froh, Sefick, & Emmons (2008) found that gratitude induction using the counting blessings technique was related to enhanced well-being, optimism, life satisfaction, less negative affect and higher satisfaction with school experience in early adolescents and the effects are long lasting. Also, Froh, Bono, & Emmons (2010) reported that gratitude predicted social integration, while prosocial behaviour and life satisfaction mediated the relation, showing that gratitude might have a significant role in fostering the adolescents' positive development toward better well-being. Based on our results, we consider that gratitude alone would not be enough to increase psychological well-being, but in interaction with prosocial behaviours we think that it could constitute a basis for effective intervention in reducing emotional problems of vulnerable adolescents.

A similar result to what other authors (ex., Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012) found was that prosocial behaviour is significantly associated with less problems with peers. However, in our study being liked by others and having friends did not associate with better psychological well-being. It seems like vulnerable adolescents need much more than good relationships with peers and positive behaviours towards them in order to be psychologically healthy.

Being prosocial was reportedly high in our sample, but gratitude was assessed much lower that that found in other samples. It might be possible that the adolescents in our study didn't have the concept of gratitude learned and exercised, given that the applications of positive psychology in education are at their beginning. Often, behavioural modification techniques that target

problematic behaviours are implemented, but the emotional basis of these behaviours might remain unknown. Our results show that adolescents identified as having challenging behaviours face high emotional problems (especially girls in our sample) and low psychological well-being.

Several limitations of our study need to be mentioned as basis for cautionary interpretation of the results, as well as basis for the need for future studies. The small number of participants, the selection manner (by convenience), as well as the high heterogeneity are sample characteristics that might constitute sources of bias in our results. A second limitation is the fact that the measures, although some (the subscales of the SDQ) were adapted for Romanian population, proved to have low internal consistency in our sample of vulnerable adolescents and need further testing in order to be adequately culturally adapted on Romanian population.

Other studies might implement our results in counselling programs based on positive psychology, so that vulnerable adolescents can feel the benefits of gratitude, prosocial behaviour on their psychological well-being and health. We consider the topic as very promising for both research and practice and therefore suggest as possible direction for research the deepening of our results, the expansion by including other variables and the generalization by replicating our results on larger samples.

6. Conclusions

Although a plethora of literature exists on the effect of gratitude on mental health, very few studies included adolescents with various disabilities and vulnerabilities. Our results show that research on the role of gratitude on mental health could be applied in both research and practice with vulnerable adolescents, in both assessment and interventions targeting the improvement of their well-being. Educational programs provided for this category of young population, at risk for various mental health problems, should, in our opinion, include elements from positive psychology applied as therapeutic and preventive techniques, that could prove effective in the management of their behaviours and emotional problems.

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Developing the critical thinking competency of the future teacher students

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Developing the critical thinking competency of the future teacher students

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Abstract	
Keywords: critical thinking competency; initial professionalisation; strategies for the development of critical thinking.	The critical thinking competency is a transversal competency, proving its usefulness in solving various school or professional tasks, regardless of the field or specialization. For a future teacher, it is a condition for improving work efficiency, for improving the style and teaching practices, for continuous training.

The study aims to investigate the opinion of the future teacher students on their need for training/ developing critical thinking and the role that the Initial Psycho-Pedagogical Program has in this respect.

The research methods used were the questionnaire survey and the curriculum papers analysis, the applied tools being a survey questionnaire and an analytical grid of the analytical programmes of the Psycho-Pedagogical Training Program.

The research sample consisted of 52 master students from the Faculty of Letters, various specializations (Romanian, French, English, translators, acting, music), who were in the second year of the Psycho-Pedagogical Training Program, level II.

The research results showed, on the one hand, the need to develop the critical thinking competency but also the current possibilities that the teacher training system has on this matter. We believe that the development of critical thinking must be one of the main aims of an initial teacher training program.

Zusammenfasung	
Schlüsselworte: Kompetenz Kritisches Denken; Bildung der Lehrer; Strategien zum Entwickeln des kritischen Denkens.	Das Kompetenz Kritisches Denken ist eine transversale Kompetenz, wobei es sein Nutzen zur Lösung von verschiedenen Schul – oder beruflichen Aufgaben, sei es das Gebiet oder Fachbildung, nachgewiesen hat. Für einen künftigen Lehrer ist es eine Bedingung der wirksame Anwendung der Tätigkeit, Verbesserung der Lehrstil – und Anwendungstechniken, der Weiterbildung.

Das Studium sieht die Prüfung der Meinung der Studenten, künftige Lehrer, über deren Bildungsnotwendigkeit/Entwicklung des kritischen Denkens und Rolle des Vorbereitungsprogramms vor.

Die angewendeten Forschungsmethoden waren: Befragungsbogen und Analyse der Curriculum-Unterlagen, bzw. das Fragebogen und die Punktbewertung der analytischen Programme des Programs für psychopädagogische Bildung.

Die befragen Personen bestand aus 52 Masterstudenten von der Fakultät für Literaturwissenschaft, verschiedene Fachbildungen (Rumänisch, Französisch, Englisch, Übersetzer, Schauspielen, Musik) vom II Jahr des Programms für psychopädagogische Bildung.

Die infolge der Prüfung erzielten Ergebnisse bestätigten einerseits die Notwendigkeit zum Erreichen des kritischen Denkens, sowohl die heutigen Möglichkeiten des Bildungsystems der Lehrer. Wir finden, dass die Entwicklung des kritischen Denkens eine der wesentlichen Ziele des Bildungsprogramms der Lehrer ist.

Schlüsselworte: Kompetenz Kritisches Denken; Bildung der Lehrer; Strategien zum Entwickeln des kritischen Denkens.

1. Introduction

In accordance with the specifics of the contemporary society, with the level of development achieved, with the social and professional requirements and exigencies, it is necessary to develop capacities and competencies that allow each individual to successfully integrate and perform a high quality activity. Postmodern human personality attributes are independence, creativity, flexibility, adaptability, critical thinking, all of which are operationalized in different capacities, competencies, traits, attitudes, which are the priorities of any educational system. Critical thinking is a transversal competency that integrates perfectly into the competency profile of any specialist, regardless of the field or specialization he can capitalize it in. For a future teacher, it must be a condition of initial professionalisation, but also of continuous training, being an important dimension of the didactic style.

The first preoccupations about critical thinking and its practice date back to Antiquity, the first form of concretisation being considered the Socratic method. The subsequent concerns have contributed to the development

of the concept so far, when it is most commonly associated with the cognitive-constructivist theory, especially with social constructivism.

2. Theoretical foundation

A. Nicu (2007, p. 27) makes a synthesis of the most recent attempts to define the concept from a philosophical and psychological perspective, especially from the point of view of the cognitivist psychology. Thus, critical thinking is:

• the capacity to analyze facts, to produce and organize ideas, to defend decisions, to make comparisons, to express aspirations, to evaluate arguments and to solve problems;

• a conscious and deliberate process used to interpret and evaluate information and experiences based on a set of reflexive capacities and attitudes that guide opinions and actions;

• an active and systematic process that understands and evaluates the arguments.

We are joining the two perspectives of defining critical thinking, mentioned above, namely philosophical and psychological, with the educational one. This approach is based, first of all, on Bloom's taxonomic levels, on his theory of information processing competencies. Three of the higher levels of processing (analysis, synthesis, and evaluation) are frequently considered essential in the critical thinking mechanism (Kennedy et al., 1991, *apud* Lai, 2011).

Shakirova (2007, *apud* Al-Shalabi, 2015) believes that critical thinking refers to that competency that helps students effectively solve different social, scientific and practical problems.

Critical thinking is "a way of approaching and solving problems based on persuasive, logical and rational arguments, which involves verifying, evaluating and choosing the right answer to a given task and reasoned rejection of other alternative solutions" (Florea & Hurjui, 2015, p. 566).

Ennis (1996, *apud* Fitriana, Fuad & Ekawati, 2018, pp. 1-2) presents 6 criteria for assessing the quality and effectiveness of critical thinking, which make up the FRISCO model. Table no.1 presents these criteria and indicators specific to each.

Table no. 1. The FRISCO Criteria for Critical Thinking (Ennis, 1996, *apud* Fitriana, Fuad & Ekawati, 2018, pp. 1-2)

Criteria	Indicators
Focus	Figuring out the problem.
Reason	- Looking for reasons for and against the decision in a certain way (pro and contra reasons). - Looking for evidence. - Identifying and judging the acceptability of the reasons.
Inference	- Making a reasonable conclusion that suits the reason.
Situation	- Identifying the thing which is relevant to the significance of the thinking activity and some of the rules that guide it.
Clarity	- Clarifying the meaning of terms and the way that is used.
Overview	- Checking what have decided and inferred.

A. Nicu (2007, pp. 19-20), quoting Paul (1993) and Lipman (1995), considers critical thinking to have some essential characteristics:

• It appeals to certain particular criteria or intellectual values, such as: clarity, accuracy, precision, consistency, relevance, justification, depth and honesty;

• It is often indispensable to reasoning;

• It involves research into facts, problems, it appreciates counter-examples, objections, other explanations, errors of reasoning;

• It is disciplined and self-correcting;

• It is dependent on contexts, on different aspects of the situation.

D. Reddington (2012) makes a "profile" of the person who thinks critically: asks pertinent questions; assesses statements and arguments; is able to admit lack of understanding or information; has a sense of curiosity; is interested in finding new solutions; is able to clearly define a set of criteria for analyzing ideas; is willing to examine beliefs, assumptions, and opinions and weighs them against facts; listens carefully to others and is able to give feedback; suspends judgment until all facts have been gathered and considered; looks for evidence to support assumptions and beliefs; is able to adjust opinions

when new facts are found; looks for proof; examines problems closely; is able to reject information that is incorrect or irrelevant; sees that critical thinking is a lifelong process of self-assessment.

Recent studies approach the issue of developing critical thinking through the opportunities offered by digital technologies (Schipke, 2018).

Other studies propose models of critical thinking development based on educational leadership, models that include curricular and co-curricular experiences (Jenkins & Andenoro, 2016).

In general, the constructivist literature proposes different models and strategies for the development of critical thinking, most of which are based on solving problem-situations, cases, situations, on formulating arguments/ counter-arguments, on making decisions.

In previous studies and research, we have shown the role of some of these models in the development of students' essential competencies other than critical thinking (Mogonea, 2008; Mogonea, 2014). However, we consider that most of these models are also effective in developing this competency.

We are enumerating some of these models, whether experimented in research or presented in the specialized literature:

- The **RMS** (**R**eading-**M**ind Maping-**S**haring) Learning Model (Joyce et al., 2011, *apud* Muhlisin, Susilo, Amin & Rohman, 2016);
- The **E-R-R** model (**E**vocation - **R**ealizing of meaning - **R**eflection) (Nicu, 2007);
- The **OLE** model (**O**pen **L**earning **E**nvironments) (Hannafin, Land & Oliver, 1999, *apud* Joiţa, 2006; Mogonea, 2014);
- The **CECERE** model (Joiţa, 2005) – it involves the following steps: creating the appropriate **Context**, realization of direct **Exploration**, individually, pairing or small group **Collaboration**, then at class level, synthetical **Elaboration** of the task solving, the formulation of personal **Reflections**, summative **Evaluation**.
- The **PICIVIR** model (Joiţa, 2005) - Problem-Understanding Questions-Keywords-Hypotheses-Verification through Arguments-Interpretations-Personal Reflections.

- The **ICON** model (Interpretation Construction), (Black & McClintock, 1995, *apud* Mogonea, 2008) - based on interpreting information, situations, ideas;
- **Situational Knowing/ Learning** Model (Joiţa, 2006; Mogonea, 2008) - based on the analysis of some cases, concrete situations.
- The **5 E** model (Bybee, 1999, *apud* Joiţa, 2006; Mogonea, 2008) - **Engage, Explore, Explain, Elaborate, Evaluate.**

Critical thinking can also be developed by valorizing the socio-cognitive conflicts (Popescu & Mogonea, 2014).

Savich (2009, p. 4) presents 6 methods that can be used in the classroom to stimulate the students' abilities to search, explore, investigate, analyze, argue certain ideas, situations:

1) simulations, 2) class or group discussions, 3) individualized student research projects, 4) multiple perspectives and viewpoints, 5) using multiple texts, and 6) critical literacy, searching for biases in texts and in media.

There are also many tools used for this purpose, the most commonly used being the cognitive maps (Mogonea, 2005a, 2005b; Mogonea & Mogonea, 2014; Tseng, 2015) and other graphic organizers (cause-effect diagrams, Venn diagrams, double bubble, etc.).

For some authors (Shpeizer, 2018), critical thinking is a way of personal and social development.

3. Methodology

The study aims to investigate the views of the future teacher students on the need to form/ develop critical thinking, as well as the role that the Initial Psycho-Pedagogical Training Program has in training/ developing this competency.

The objectives were:

- To identify the role of the Psycho-pedagogical Training Program in the training/ development of critical thinking competency;
- To analyze the curriculum of the Psycho-pedagogic Program in order to identify the elements specific to critical thinking;
- To know the students' opinion on the importance of critical thinking in the competency profile of a future teacher;

- To identify ways of training, but also of capitalizing on critical thinking in school practice.

In accordance with these objectives, we have validated the following **hypothesis**:

1. The curriculum of the Psycho-pedagogical Training Program contains elements that stimulate the formation/ development of the critical thinking competency.

2. The critical thinking competency is an important dimension of the competency profile of a future teacher.

The research methods used by us were the curriculum analysis and the questionnaire survey. We used an analysis grid on the analytical programmes which were part of the Psycho-pedagogical Training Program curriculum. Likewise, we intended to identify the curricular elements that provided future teachers with critical thinking competency. In addition, we provided an opinion poll, applied to a number of 52 master students from the Faculty of Letters (their master's specializations being Romanian, English, French, acting and music) in the moment of finalizing the Psycho-Pedagogical Training Program, level II.

The analysis grid included several indicators, organized into four categories, corresponding to the four curricular elements: aims, contents, training strategies, evaluation strategies. Through these indicators we aimed to highlight the role that the Psycho-pedagogical Training Program (level II) has in the formation of critical thinking competencies. We analyzed the analytical programs of the disciplines included in the curriculum of the Program, for Level II, of deepening. For each indicator, we marked its presence or absence.

The opinion questionnaire aimed at identifying the needs for the development of students' critical thinking, as well as their opinion about the role that the Psycho-Pedagogical Program has in achieving this goal.

The instrument included 10 items, of different categories, with closed responses (both simple and multiple choice) but also open ones, which followed different aspects, from conceptual clarifications to those that focused on the role of critical thinking competency in the formation of a future teacher, on how it could be developed or how to use critical thinking in the future profession. One of the items was meant to conduct an analysis of the role that the disciplines of the Psycho-pedagogical Training Program had in training/ developing critical thinking.

4. Results and discussion

We are presenting the results gathered after the two research instruments have been applied, both from the perspective of the extent to which they allowed the verification and the validation of the two established assumptions. In order to validate the first hypothesis:

1. The curriculum of the psycho-pedagogical training program, level II, contains elements that stimulate the formation/ development of the critical thinking competency, we are presenting the results obtained from the analysis scale of the analytical programs of the Psycho-Pedagogical Training Program for Level II certification. As a level of deepening, we believe that it is appropriate to develop this competency, although we do not exclude the possibility that the bases of its training can be achieved even from the first level through some of the disciplines studied at this level.

We are presenting, for each of the four categories of the scale indicators, the extent to which the psycho-pedagogical disciplines corresponding to level II contribute to the development of critical thinking.

Table no. 2 presents the contribution of these disciplines, from the perspective of the pursued finalities, which are found in the analytical programs of the disciplines.

Table no. 2. The extent to which the educational finalities of the psycho-pedagogical disciplines, level II, contribute to the development of critical thinking

Crt. no.	Observational indicators	Discipline					
		Psychopedagogy of Adolescents	Research Methodology	Didactics of the Field of Education	Sociology of Education	Programming and Management	Pedagogical Practice
1	The learning finalities						
1a	They aim to develop the argumentation/ counter-argumentation capacity		X				
1b	They follow the analysis and solving of some cases, problems, situations	X			X		
1c	They propose the analysis of some ideas, theories, models, to identify the advantages and/ or disadvantages				X		
1d	They intend to determine the efficiency of some action modalities, solutions, and decisions			X		X	
1e	They request an individual point of view on a situation, problem, case				X		
1f	They encourage the self-analysis of how to act or solve a situation						X

As you can see, all disciplines pursue (some directly, others indirectly, implicitly) the formation of the critical thinking competency. For most of them, critical thinking is exercised in presenting, analyzing the cases, situations, in solving them and in making decisions.

The same situation can be noticed in the curricular content specific to these disciplines. Table no. 3 shows this situation.

Table no. 3. The extent to which the curricular content specific to psycho-pedagogical disciplines, level II, contributes to the development of critical thinking

Crt. no.	Observational indicators	Discipline					
		Psychopedagogy of Adolescents	Research Methodology	Didactics of the Field of Education	Sociology of Education	Programming and Management	Pedagogical Practice
2	**Curricular content**						
2a	They propose themes or content on critical thinking	X	X		X		
2b	They address issues that generate controversy about training or education	X			X		
2c	They present cases, educational, training, managerial situations			X	X	X	X
2d	They propose themes that require multiple approaches and interpretations	X					

The disciplines specific to the second level of psycho-pedagogical training propose curricular contents that train the students' argumentation or counter-argumentation ability or different situations, cases, problems, for the analysis and solving in which critical thinking is also involved.

Regarding the methodological methods used, the situation is even more convincing, because all disciplines propose a heuristic approach, based on discovery, analysis and reflection of the themes, as there can also be seen in Table no. 4.

Table no. 4. The extent to which the training strategies used in teaching the psycho-pedagogical disciplines, level II, contribute to the development of critical thinking

Crt. no.	Observational indicators	Discipline					
		Psychopedagogy of Adolescents	Research Methodology	Didactics of the Field of	Sociology of Education	Programming and Management	Pedagogical Practice
3	**The training strategies**						
3a	They propose a heuristic approach to the situations	X				X	X
3b	The methods and tools that stimulate the analysis of some cases or situations are used	X		X	X		
3c	The methods and tools that encourage reasoning some answers or solutions are used	X	X		X		
3d	Debates, collective discussions are used	X				X	
3e	Activity in pairs, in small groups is encouraged	X				X	

In accordance with the methodological approaches to curricular content, the evaluation strategies, methods and tools proposed also aim at, among other things, the extent to which the critical thinking competency of the future teachers has been developed. Table no. 5 illustrates this situation.

Table no. 5. The extent to which the evaluation strategies used in teaching the psycho-pedagogical disciplines, level II, contribute to the development of critical thinking

Crt. no.	Observational indicators	Discipline					
		Psychopedagogy of Adolescents	Research Methodology	Didactics of the Field of Education	Sociology of Education	Programming and Management	Pedagogical Practice
4.	**The evaluation strategies**						
4a	They refer to the argumentation/ counter argumentation capacity	X	X		X	X	
4b	They track the capacity to analyze and solve some cases, problems, situations	X		X	X		
4c	They measure the ability to analyze ideas, theories, models to identify the advantages and/ or disadvantages				X	X	
4d	They aim at establishing the efficiency of some action ways, of solutions						X
4e	They refer to the ability to draw up an individual point of view on a situation, problem, case				X		
4f	They encourage some self-analysis of how to act or solve a situation	X				X	X

We believe that all disciplines included in the Second Level of the Education Plan of psycho-pedagogical training play a role in the formation of this competency, which is integrated within the context of the competency of the modern teacher.

2. The critical thinking competency is an important dimension of the competency profile of a future teacher.

In order to verify this hypothesis, we are presenting the results obtained after the survey questionnaire was applied to students. As mentioned above, this tool has tried to provide insight into MA students' opinions, at the

end of the Psychopedagogical Training Program, level II, regarding the concept of critical thinking, its importance and role, the ways in which it can be developed, including the role that the program had in this respect, on the possibilities of capitalizing on the critical thinking competency in school practice. For most of the students questioned, critical thinking is of great importance for a future teacher (figure no. 1).
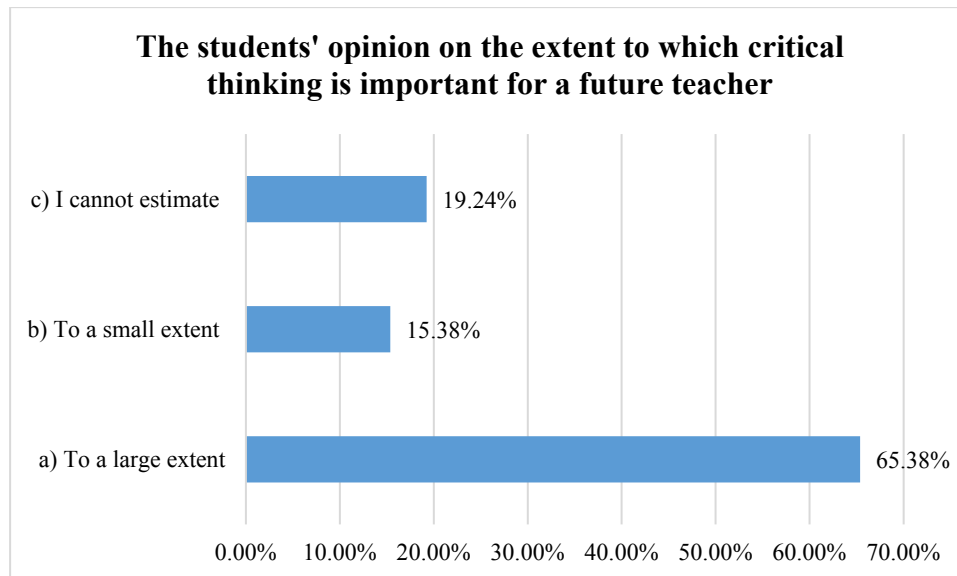
The students' opinion on the extent to which critical thinking is important for a future teacher

Figure no. 1. The students' opinion on the extent to which critical thinking is important for a future teacher

One of the open-ended questionnaire items asked respondents to define the concept of critical thinking. Beyond the variety of responses, by customizing the formulated definition, we can also observe some common notes. Thus, most of them admit that critical thinking is a mental process based on the analysis, on the processing capacity of evaluating information, situations, ideas, in order to determine their truth value. The analysis is a constructive one, asking for arguments or counter-arguments, establishing a personal position with regard to the subject under discussion.

Some of the investigated students also caught some features of critical thinking: clear, rational, creative, free.

There have been definitions made by students who have understood the complexity of this process, being involved not only in processing information, but also in making decisions or formulating valuable judgments.

As for the role that critical thinking has for a future teacher, the answers provided were also varied. We are synthesizing some of the assertions that have been consistently found in the answers provided:

• To identify mistakes;
• To build arguments and counter-arguments;

• To solve different educational or training problems, to make effective decisions;
• To carry out an assessment of your own activity;
• To make a correct assessment of the students' performance;
• To identify innovative solutions for complex situations;
• To improve the teaching style;
• To enable the teacher to be rational and balanced;
• To train the teacher so that, in turn, to encourage students to think independently, to be reflexive;
• It is essential in research, innovation, development.

Most of the students questioned (78.85%) consider that critical thinking can be practiced, while only 5.77% think that this goal is not achievable and 15.38% cannot estimate it.

Starting from the premise that it is possible to practice critical thinking, one of the items of the questionnaire asked the students to mention at least three ways in which it can be formed/ developed.

We are synthesizing here the answers provided:

• Expressing your own views on a situation, idea, theory, etc;
• Cooperation in carrying out tasks;

• Frequent formulation of some reflections on their own activities;

• Making decisions;

• Carrying out tasks, applicative papers meant to request the ability to argue;

• Using the Socratic method;

• Exercising the capacity to schematize, essentialize the acquired information;

• Through/ during internship;

• Frequently creating problem-solving situations that need to be solved by ways that go beyond the templates, the patterns usually used in those situations.

Regarding the extent to which the Psycho-pedagogical Training Program, level II aims at training/ developing the critical thinking competency, a large number of the students have appreciated that this goal is largely achieved. The distribution of responses on the three variants offered is shown in figure no. 2.
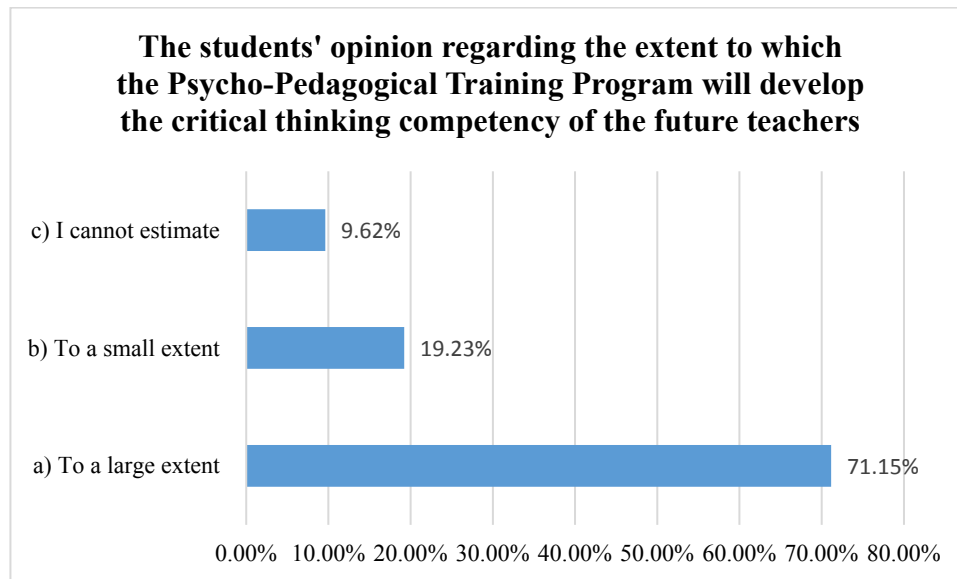

Figure no. 2. The students' opinion regarding the extent to which the Psycho-Pedagogical Training Program will develop the critical thinking competency of the future teachers

Another item in the questionnaire investigated the students' opinion about the factors or conditions that influence the development of critical thinking skills. The answers are presented, in percentage, in figure no.3. The students had the possibility to choose from several variants:
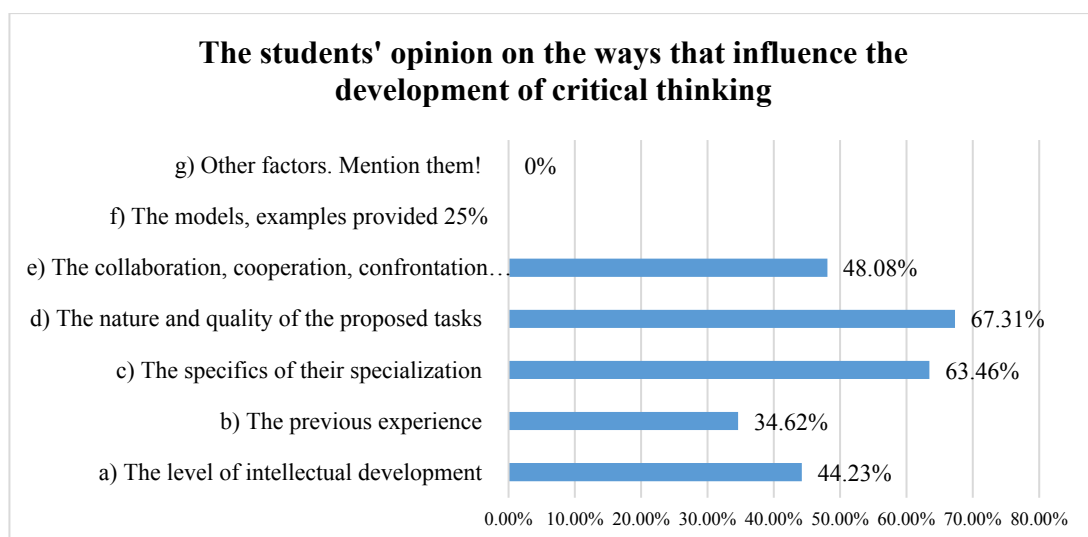

Figure no. 3. The students' opinion on the ways that influence the development of critical thinking

As there can be seen, the students consider that the specifics of the specialization and the nature and quality of the proposed tasks greatly influence the formation of critical thinking competency.

Although the analysis of the curriculum of the Psycho-pedagogical Training Program highlighted its role in the formation of critical thinking competency, we also sought to obtain feedback from the students on this issue. As such, one of the items in the questionnaire asked them to mention the discipline/ disciplines that contributed to this goal.

Following the responses, we made a hierarchy of the role of the psycho-pedagogical level II disciplines in the formation of critical thinking competency (figure no. 4).
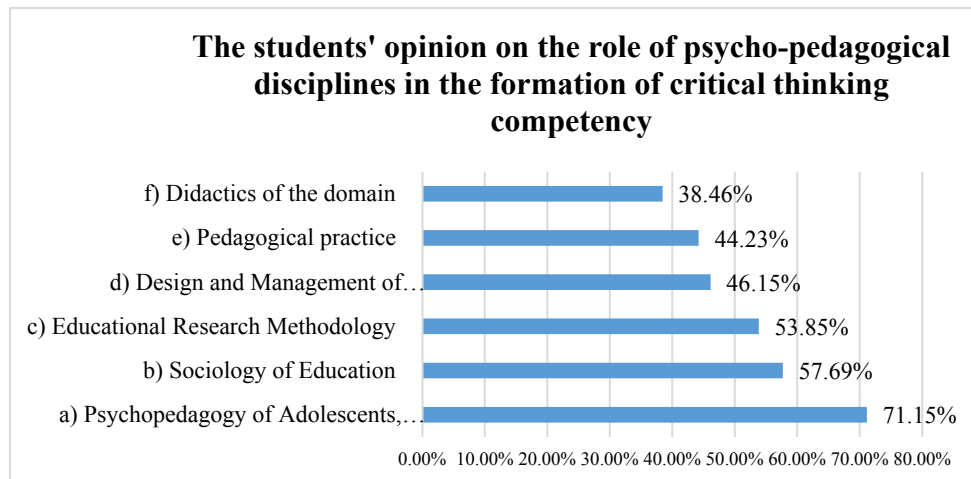

Figure no. 4. The students' opinion on the role of psycho-pedagogical disciplines in the formation of critical thinking competency

As we can see, students appreciate that each discipline plays an important role in the formation of this competency, placing first the Psychopedagogy of adolescents, young people and adults. We consider that the greatest contribution of this discipline regards the significant added value of the discipline, on all four curricular elements, to the formation of that competency, but especially to the curricular content that is most easily identified and highlighted by the students.

The students were also questioned about the situations in which they could capitalize, in their didactic activity, on critical thinking.

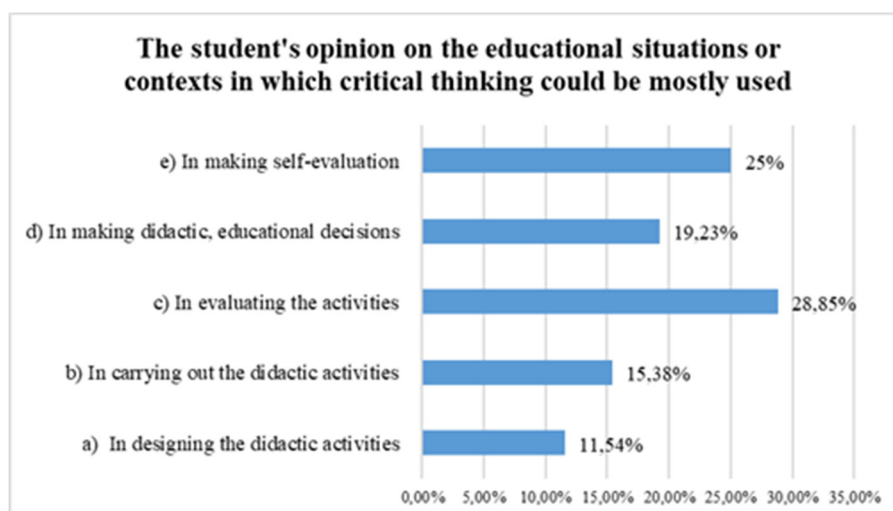Figure no. 5 presents the answers provided by the students to this item.

Figure no. 5. The student's opinion on the educational situations or contexts in which critical thinking could be mostly used

The students believe that critical thinking can help them especially in assessing students, but also in evaluating their own activities. Also, making decisions is a moment when critical thinking is practiced.

Among the advantages of using critical thinking by the teacher, considered important by the students (as there can be seen from the answers provided by the latter in the last item of the questionnaire), we mention:
- It enables problem solving in efficient ways;
- It allows to filter the knowledge to be taught to students;
- It is a model for the pupils while the teacher can contribute to the development of their critical thinking;
- It increases the teacher's objectivity in the evaluation act;
- It helps the teacher to make the right decisions for each situation;
- The teacher can more effectively self-evaluate his/ her work;
- It favors communication with the students, as well as pupil-student communication;
- It encourages free expression of one's own point of view and its support.

All these examples are all arguments that support the importance of stimulating the critical thinking of future teachers.

5. Conclusions

In an ever-changing society that is constantly evolving, one must be flexible and creative, be able to adapt easily and quick to different situations so that one becomes more competitive and effective. The school, in trying to respond to the needs of this changing world, requires the formation of those competencies that allow each individual to be granted a successful integration into social structures and mechanisms. We consider that one of the most important competencies of the the modern man's personality is critical thinking. For teachers to be able to train and develop this competency in students, they must be trained in this themselves.

Our research highlighted, on the one hand, the possibilities that the current teacher training system has for the development of this competency, but also the opinion of the students at the end of the initial psycho-pedagogical training on the needs and the possibilities of forming the thinking critical.

The analysis grid designed by us aimed at establishing the extent to which the psycho-pedagogical disciplines corresponding to the second level of training are aimed at stimulating the students' critical thinking, being conceived on the curricular model on which the analytical programs of the disciplines are also carried out. For each educational discipline, we noticed the presence of elements that confirm the hypothesis we set for all categories of indicators for at least one indicator in the respective category (the four categories being: finalities, curricular contents, training strategies, evaluation strategies).

The questionnaire applied to the students confirmed the conclusions drawn from the application of the analysis scale. Students believe that this competency is important and that it must be integrated into a teacher's profile. In addition, they have also identified the opportunities they have had to develop their critical thinking, as well as the ways, situations and contexts in which, as teachers, they could use it in school practice.

Authors note:

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Attitudes of Special Education teachers towards sexual education of students with intellectual disabilities: Effects of religiosity and professional experiences

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Attitudes of Special Education teachers towards sexual education of students with intellectual disabilities: Effects of religiosity and professional experiences

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Abstract

Keywords:
sexual education, intellectual disability, attitudes towards sexual education, teachers' attitudes, level of religiosity.

Sexual Education (SexEd) in general is a controversial topic throughout the world. When it comes to sexual education of people with disabilities, the subject becomes even more difficult and sensitive for both caregivers and specialists. In order to implement a SexEd program for persons with intellectual disabilities, different individual and social factors should be considered. Among these factors, attitudes towards the sexuality and sexual education of those who provide it was identified as priority. In this respect, the aim of this study was to identify special educational teachers' attitudes towards teaching sex education in classroom, as well as to establish possible correlations between the attitudes towards teaching, teachers' knowledge and the way they communicate with their students about sexuality. The correlations between the general attitudes of the teachers, the attitudes towards teaching SexEd and the socio-demographic characteristics of the respondents (gender, age, parental status, professional experience, the self-declared degree of religiosity) were discussed. Interaction effects were identified and analyzed.

Zusammenfasung

Schlüsselworte:
Sexualaufklärung, Sexualkunde, Sexualbildung, geistige Behinderung, Einstellungen zur Sexualerziehung, Einstellungen der Lehrer

Sexuale Aufklärung ist allgemein auf der ganzen Welt noch ein sehr kontroverses Thema. Besonders die sexuale Aufklärung von Menschen mit Behinderung ist ein sensibles Thema und fällt Pflegekräften sowie Fachkräften nicht leicht. Um ein Programm zur sexuellen Bildung von Menschen mit geistiger Behinderung durchführen zu können, müssen verschiedene individuelle und soziale Faktoren berücksichtigt werden. Unter all diesen Faktoren, spielen die Einstellung der Leiter solcher Programme zu Sexualität und deren sexualen Bildung, eine wichtige Rolle. Daher waren die Ziele dieser Studie spezielle Einstellungen von sonderpädagogischen Lehrern zu dem Sexualkunde Unterricht im Klassenzimmer zu ermitteln und einen Zusammenhang zwischen der Einstellung der Lehrer zum Unterrichten, dem Wissen der Lehrer und der Art wie sie mit den Schülern über Sexualität sprechen. Die Zusammenhänge zwischen der generellen Haltung von Lehrern, der Einstellung zum Unterrichten von Sexualkunde und der sozial demographische Merkmale der Befragten (wie zum Beispiel Geschlecht, Alter, Status der Eltern, Berufserfahrung, selbst ernannter Grad der Gläubigkeit) wurden diskutiert. Dabei wurden Interaktionseffekte festgestellt und analysiert.

1. Introduction

Sexual education (SexEd) represents an important and highly controversial topic throughout the world. The specialized literature suggests that, when it comes to the sexuality of persons with disabilities, SexEd often becomes a more difficult and delicate subject (Stinson et al., 2002). A number of factors have been identified as having an impact in developing and implementing SexEd programs for persons with disabilities of different age categories, including children. Some of the factors refer to the particularities of the beneficiaries, while others relate to the providers of these programs, often the specialists and teachers, and/or to the parents and caregivers. Examples of these factors related to *the*

persons with disabilities (i.e. the beneficiaries of the SexEd programs) are: the degree of disability, the abilities and the limits of each person, their emotions, thoughts and feelings (Stinson et al., 2002).

Regarding the *providers* of these programs, a factor of major importance in the implementation of the SexEd programs for persons with disabilities refers to their **attitudes** towards the subject of sexuality and disability (McGuire & Bayley, 2011). Since literature indicates that information on this delicate subject tend to be perceived differently by each person (according to their own beliefs and experiences), the attitude that these people have towards the subject might impact the way in which the information is transmitted, namely a high level of

subjectivity might be introduced in some cases (Brown & Pirtle, 2008). It is therefore important that those who conduct SexEd programs for persons with disabilities acknowledge their own skills, beliefs, attitudes and limitations towards the topic, in order to ensure the transmission of accurate and objective information (McGuire & Bayley, 2011).

It is commonly acknowledged in the international literature that, in the implementation of SexEd programs, the attitudes of specialists towards sexuality and the way of teaching sexual health topics for people with disabilities might represent a crucial factor related to the effectiveness of these programs (Cohen, Sears, Byers, & Weaver, 2004; Mkumbo, 2012). Also, it is important to take into account the fact that for those children and young people with disabilities that are spending the majority of their time in special education institutions their in-service teachers are sometimes the most accessible source of information about sexuality. Therefore, identifying teachers' general attitudes towards sexuality, as well as their attitudes towards teaching sexual education in special school, is considered an optimal starting point for the implementation of intervention programs in the field of sexual health education for people with disabilities, as well as providing appropriate training the specialists to provide an objective and accurate sex education to those in need (Gonzalez-Acquaro & College, 2009).

Beyond the attitudes towards sexual education, several international studies indicate an increasing reluctance of teachers regarding the issue of teaching sexual education to children with intellectual disabilities, under the argument that those responsible for the sexual education of this category of persons should be the caregivers and/or their parents. In a study by Povilaitienė & Radzevičienė (2013), the authors found that most teachers have a negative attitude on the idea that persons with mild cognitive disabilities can form their own families. In the same study, it was emphasized that teachers identified the parents or family of the persons with disabilities as those responsible to teach them about relationships.

Attitudes of special education teachers towards the sexual education of persons with disabilities

In recent years, person-centered ideologies have affirmed the right of the persons with disabilities to form intimate relationships. However, people with intellectual disabilities continue to face negative attitudes and

restrictions in terms of opportunities for sexual expression (McGuire & Bayley, 2011). As people with disabilities spend their entire lives in various social systems (family, community, school, work), understanding the rules that could influence the development of sexual identity is an important topic.

Various studies have been conducted on the knowledge, attitudes and concerns of caregivers, parents and teachers of people with disabilities related to sexuality, the results highlighting the need for specialist support in understanding complex issues that connect to it (Isler, 2009). The persons responsible for the inclusive education of the persons with intellectual disabilities are considered to be those who "…*ensure the acquisition of social skills for integration into society, the exploration of sexuality and the awareness of ways to protect against sexual abusers or to counteract sexually transmitted diseases*" (Swango-Wilson, 2008 *apud* Bartoş & Rusu, 2011). The discomfort that teachers sometimes experience in teaching subjects of sexual education to children with intellectual disabilities may impact the children's education. Thus, the discovery of their own sexuality in absence of any guidance on this issue by significant adults might increase the risk of abusive relationships, sexually transmitted diseases, even unwanted pregnancy. Both emotional problems developed by children and the lack of information about sexuality were identified as possible causes for the occurrence of these risks (Boehning, 2006).

Sexual education for children with disabilities is often considered different from those for typically developed children, as most of the times they are mistakenly seen as asexual, uninterested in sex or unable to take part in sexual activities or even as "monsters" incapable of controlling their sexual impulses. These myths and preconceptions have been identified among members of the population (Anderson & Kitchin, 2000). As sexual education is a controversial subject in many schools, especially in those accommodating children with disabilities, the type of sexual education programs, the components of the curriculum, as well as the nature of topics to be provided are often left to the schools' decision. Therefore, these programs often include total abstinence, abstinence until marriage, fear-induced planning, at the parents' request, in order for the information received at home to be strengthened by the school (SIECUS, 2001).

The professionals' level of knowledge about sexual education can have a positive influence on the education and support provided to children with intellectual disabilities. However, teachers might not always possess the appropriate level of knowledge, mostly due to the lack of training programs. Literature indicates that teachers often report that they are poorly trained in teaching sexual education programs, and thus unable to answer the questions raised in class (Rodriguez, Young, Renfro, Ascencio, Haffner, 1996; Howard-Barr, Rienzo, Pigg & James, 2005). In a research conducted on a group of teachers from Tanzania, it was found that positive attitudes towards teaching sexual education in schools was not enough and that it was necessary to provide teachers with knowledge, skills and confidence in teaching subjects of sexual education (Mkumbo, 2012). In another study on 68 teachers, Gonzalez-Acquaro & College (2009), showed that providing information on sexual education and intellectual disability to teachers increases not only the level of knowledge, but also the attitudes and feelings of self-efficacy. Thus, awareness-raising and knowledge enrichment programs are necessary in the field of sexual education. Also, the increase of the level of comfort of teachers on topics such as sexuality of people with disabilities is also a condition for the efficacy of these programs (Howard-Barr, Rienzo, Pigg & James, 2005).

Hosseinkhanzadeh (2012) focused on the attitudes of parents and teachers from Iran in relation to the sexual education of people with intellectual disabilities. It was found that about half of the participants do not agree with masturbation in the case of people with disabilities, and more than 50% agree with the use of medication to inhibit their sexual behaviors. However, 64% of teachers agreed that sexual education should be mandatory. A percent of 68% of the teachers agreed that people with disabilities have the right to form their own families, but only after attending several genetic counseling sessions, that should be mandatory for people with intellectual disabilities. In addition, both parents and teachers agreed that people with disabilities should participate in educational programs that teach them about the meaning and responsibilities of family life before they establish their own family (Hosseinkhanzadeh, 2012).

In a descriptive study on 451 teachers, Maia and colleagues (2015) investigated the teachers' opinion on sexuality and sexual education of students with intellectual disabilities. It was found that 94% of teachers

were aware of their students' sexuality, 37.5% having positive and 53.8% negative feelings regarding the issue. Even though 87.8% of teachers believed that they can contribute to the sexual education of disabled students, they considered it was necessary to prepare for the activities either on their own (39.9%) or with school and family support (24.4%). So even if a part of them are ready for discussion and think that the dialogue with the students is necessary, most of them feel pressured and say they have difficulties approaching the topics of sexuality with students with intellectual disabilities. Even though teachers acknowledge the need for sexual education, most of them report difficulties in teaching it, either because they lack the appropriate academic and personal training, or because they are anxious about the reactions that pupils' families might have (Maia et al., 2015).

Brown and Pirtle (2008) highlighted that the way sexuality is expressed and perceived is determined by several factors, such as culture, religion, socio-economic status and ethnic history. However, it is considered that more research is needed on these factors, as well as their impact on sexuality and intellectual disability. Religiosity, namely, the level of faith, as well as the degree of religious practice represents another category of factors that can determine how teachers and the rest of the professionals relate to sexuality issues. Berger et al. (2004) identified that teachers with a high level of faith in God disagree with gender equality, homosexuality rights, abortion or contraceptive methods as well as with the teaching of the social component of sexual education before the age of 15.

In the light of the current research, sexual education is considered an important component that contributes to the harmonious development of persons with intellectual disabilities. Therefore, the teachers' opinions and attitudes on the issue are important to investigate, as they are considered mediators in transmitting and consolidating the information that the students are exposed to, so that they can eventually have a healthy sex life. Following a review of the previous studies, one can conclude that the attitudes of the teaching staff towards the sexual education of persons with disabilities is generally favorable, despite some negative aspects related to the topic. However, the need to develop general and research-informed knowledge about sexuality was found to be necessary among teachers, and it can lead to greater openness from their part to discuss with students about this subject.

To our knowledge, in Romania, at national level, no previous research was conducted on investigating the attitudes of special education teachers towards the teaching of sexual education to children with intellectual disabilities. The current paper seeks to identify the attitudes towards sexuality of teachers from a special education secondary school in Romania, as well as to identify the demographic factors that might influence teachers' attitudes towards teaching of sexual health topics to children with intellectual disabilities. The main objectives of the current study are:

1. To identify the level of training (in terms of sexual health education) of special secondary school teachers in teaching sexual education in the classroom.

2. To investigate the attitudes of special secondary school teachers towards sexuality in general and their attitudes towards teaching sex education in class.

3. To analyze the correlations and moderation effects between the levels of training, professional experience, and the degree of self-reported religiosity of teachers and their attitude towards teaching sexual health education to students with intellectual disabilities.

2. Research methodology

2.1. Participants

A number of 65 teachers were selected from the Special Secondary School from Baia Mare, based on their willingness to participate voluntarily in our research (i.e., convenience sampling). The participants were aged between 23 and 65 years, with a mean age of 39.13 ± 9.67. In terms of gender distribution, the sample included 59 female and 6 male teachers. All the participants were residents of Baia Mare city, Maramureș county, Romania. The teachers included in the study were graduates of special education programs, psychology or had other specialties (primary and pre-primary education, social psychology, physical therapy, social assistance, mathematics, physics, law, economics, etc.), with experience between 1 year and over 20 years in the field of special education. The demographic characteristics, including the parental status of the participants, are presented in table no. 1. The level of self-reported religiosity, which was assessed with a 5-point Likert scale item (*"Do you consider yourself a religious person?"*), is also presented in the table no.1.

Table no. 1. Demographic characteristics of the sample

	Participants	
Gender		
	female (%)	90.8%
	male (%)	9.2%
Age		
	Minimum (years)	23
	Maximum (years)	65
	Mean (SD)	39.13 (9.67)
Parental status		
	No kids (%)	35.4%
	With kids (%)	64.6%
Studies		
	Psychology, special education (%)	72.3%
	Other specialties (%)	27.7%
Experience in special school		
	Less than 10 years (%)	63.1%
	More than 10 years (%)	36.9%
Self-reported level of religiosity		
	High (%)	32.3%
	Medium (%)	49.2%
	Low (%)	18.5%

2.2. Instruments

Two questionnaires that were developed and used in other studies were selected for the study in order to identify the types of attitudes and the level of SexEd knowledge of teachers from the special school. The instruments have been translated and adapted for Romanian language usage by the authors of the study.

1. The *Attitudes toward Sexuality Scale, ATSS (Fisher, 1988)* was included in the study in order to identify the general attitudes of teachers towards sexuality. The authors of the questionnaire have used and modified some of the items of the *Calderwood Questionnaire of Attitudes about Human Sexuality* (Calderwood, 1971), resulting in the Attitudes toward Sexuality Scale, that covers a large proportion of sexuality topics. The ATSS questionnaire includes 13 items targeting the attitude on different topics of sexuality such as nudity, abortion, contraception, premarital sex, pornography, prostitution, homosexuality and sexually transmitted diseases. The items are ranked on the Likert scale from 1 to 5, from total disagreement to total agreement. The results may range from 13 to 65, with smaller scores indicating a high degree of conservatism in terms of sexuality, and higher scores indicating a high level of permissiveness for the same subject. The ATSS questionnaire' proved to have a fair internal

consistency, as shown by the values of Alpha Cronbach that various authors reported for different categories of respondents. Thus, for a group of preadolescents aged 12-14, Alpha Cronbach coefficient was 0.76, for adolescents aged 15-17 years its value was 0.65, while for the 18 to 20 years old respondents, the coefficient was 0.80 (Fisher, 1988). The authors found a more adequate alpha Cronbach for an adult group, with a value of 0.84, indicating very good internal consistency for this questionnaire, which is another reason why it was chosen for the current research.

2. *Attitudes toward Teaching Human Sexuality Inventory*, ATTHSI (Schultz & Boyd, 1981) was designed to evaluate the attitudes of in-service teachers towards sexual education in order to help the development of the sexual education field. After a consistent analysis of the literature on sexuality, the authors selected several topics to be covered in identifying personal attitudes about sexuality and about its teaching in class. Thus, the items were divided into 5 scales: (GK) general knowledge of sexuality, (CS) communication with students, (IC) community influence, (SAPI) school administration and peer influences, (SSFSE) special school as a facilitator of sexual education. The questionnaire includes 55 items, ranked on the Likert scale from 1 to 5, from total disagreement to total agreement. The higher scores for the first two scales, show better knowledge and communication with the pupils. For the other 3 scales, higher scores show greater openness of the community, school administration and special school as a facilitator of sexual education on this subject. Schultz and Boyd (1981), used the questionnaire in their study and reported Alpha Cronbach values as follows: for general attitudes towards the teaching of sexual education 0.87, for the subscale of general knowledge about sexuality 0.9, which indicated very good internal consistency, while for the subscale of community influences, the Alpha Cronbach coefficient was 0.42, a possible explanation for this being the small number of items in this subscale. The results of the Alpha Cronbach reliability coefficients contributed to the selection of this second measure for the current research.

2.3. Procedure

After the translation and linguistic adaptation of the instruments into Romanian by the authors of the study, these were applied individually in paper-pen form to each of the participants. The questionnaires were given to the participants to have them at home and were returned after these were filled in.

2.4. Results

Psychometric properties of the used questionnaires

Table no. 2 shows that for both the ATSS questionnaire and the ATTHSI questionnaire, the Alpha Cronbach coefficient we obtained for the sample of this research is high, with results close to those obtained in previous studies. Therefore, both scales proved to have an appropriate internal consistency. The reliability for the 5 subscales of the ATTHSI was also investigated. The first two scales, general knowledge about sexuality (GK-20 items) and communication with students (CS-15 items) showed good internal consistency for the studied sample (table no. 2). The internal consistency of scale 4, which refers to school administration and peer influences (SAPI-8 items), proved to be low. However, the scales that refer to the special school as a facilitator of sexual education (SSFSE-6 items- 4 after exclusion) and to the influence of the community (IC-6 items-4 after exclusion), have the Cronbach alpha coefficient below the accepted value of 0.5.

Several problematic items were decided to be removed in order to obtain more reliable coefficients. Thus, items 2 and 49 were removed because they were found to decrease the value of Alpha Cronbach and were considered irrelevant to the scale they belonged to. We consider that during the translation process from English language to Romanian, the items 8 and item 37 were formulated in a way that created some comprehensibility difficulties to the participants. It is important to mention that even after the removal of more problematic items, the values of Alpha Cronbach remained relatively low and, as a consequence, the results of this study have to be interpreted with caution. One possible explanation for the low reliability can be the small number of items in the two subscales of the ATTHSI questionnaire, as stated by Schultz and Boyd (1981). Also, characteristics of the participants, gender, age, parental status, specialty studies, special school experience and self-reported

religiosity level could influence the value of the reliability coefficient.

Table no. 2. Values of Alpha Cronbach coefficient for the instruments and their subscales, before and after the removal of the problematic items

Scale	Alpha Cronbach		Item deleted	Alpha after deleted item
	Reported by the authors	Determined in the current study		
ATSS	.84	.816		
ATTHSI	.87	.841		
GK	.90	.875		
CS		.768		
SSFSE		.395	Item 8, item 37	.449
SAPI	.42	.533		
IC		.268	Item 2, item 49	.328

Correlations and comparisons between variables

A series of Pearson correlations were computed among the variables of the study. The positive correlation between ATSS and ATTHSI (r = .309, p <0.05) indicates that the more favorable the general attitudes of participants about sexuality (ATSS) are, the higher is the openness to teach sexual education in special schools (ATTHSI). The analysis of the correlations between the ATSS scale and the 5 subscales of the ATTHSI questionnaire, allowed the identification of a significant positive correlation between the general score of the ATSS scale and subscale CS of the ATTHSI questionnaire (r = .471, p <0.01), i.e., the subscale that relates to communication with students about sexuality. This means that the higher the scores for the general attitude regarding sexuality is, the greater is the teachers' willingness to communicate with their pupils about this subject.

Correlations were also computed between the overall (global) scores of the ATTHSI questionnaire and its subscales. Positive correlations were found between the overall score and those obtained in four out of the five subscales: general knowledge about sex education (r = .857, p <0.01), communication with students (r = .819, p <0.01), school administration and peer influences (r = .298, p <0.05) and community influence (r = .490, p <0.01). In addition, positive and inter-scale correlations were found between: subscale GK and subscale CS (r = .585, p <0.01), meaning that a better knowledge of sex

education topics is related to better communication with students about this subject; between subscale IC and subscale GK (r = .316, p <0.05) and subscale CS (r = .256, p <0.05), meaning that the influence of the community is an important factor in knowing and communicating with the students about sexual education.

Table no. 3. Values of the inter-scales Pearson correlations

	ATSS	ATTHSI	GK	CS
1. ATSS				
2. ATTHSI	.309*			
3. GK		.857**		
4. CS	.471**	.819**	.585**	
5. SAPI		.298*		
6. IC		.490*	.316*	.256*

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

To compare the differences between two independent samples for the demographic groups (gender, age, parental status, specialization and experience), we used Student's t-test for independent samples. As it can be observed in table no. 4, there is a statistically significant difference in the teachers' willingness to communicate with children about sexuality, depending on their gender. After comparing the means, it was found that the male participants in our sample were more open towards communicating with children about sexuality topics than the female gender participants. For the same group, we found a significant difference regarding the influence of school administration and peer influence. Thus, the male participants in our group appeared to be less influenced by the school administration than the female gender group.

Taking into consideration the age group, it was noticed a significant difference between the categories of participants with the age lower than 40 and the ones over 40 regarding the general attitudes towards sexuality, the first group being more open towards sexuality subjects. A similar result was observed when we compared the means of the participants with no children with the ones that have their own children. Thus, the participants with children tended to have more conservatist attitudes towards sexuality. Also, there was a mean difference between the ones without children when it came to communication with students meaning that the communication with students tends to be more facile for the teachers without children.

A difference was also acknowledged in our sample referring to specialization in relation with the school

administration and peer influence. By comparing the means, it was observed that the persons specialized in social studies were more influenced by the school administration and peers than the ones that are specialized in other fields.

Another difference was noticed between the participants with less than 10 years of experience in special education and the ones with more than 10 years of experience regarding their general attitudes towards sexuality, meaning that the more experienced participants tended to have a higher degree of conservatism towards sexuality.

An ONEWAY-ANOVA test was used to determine the significance of the differences regarding sexuality and sex education depending on the participants self-reported level of religiosity. A significant difference was found between the groups regarding the general attitudes towards sexuality (p<.001), the attitudes towards teaching human sexuality (p<.005) and, also the scale regarding communication with children (p<.001). As the self-declared level of religiosity of the teachers was higher, their general attitudes about sexuality issues tended to be more conservative, the openness to teach sex education topics in the special school more limited and the communication with students about sex topics more problematic.

Table no. 4. Means and standard deviations of the scores to different scales and subscales, depending on the demographic characteristics

		ATSS	ATTHSI	GK	CS	SSFSE	SAPI	IC
Gender	Feminine	42.81 (8.98)	178.03 (18.86)	82.55 (11.06)	48.38 (8.37)	11.10 (3.12)	20.77 (4.30)	11.77 (2.53)
	Masculine	44.50 (15.46)	192.50 (19.37)	84.66 (13.89)	56.83 (7.33)**	12.33 (2.50)	23.50 (2.88)*	11.66 (3.38)
Age	Less than 40	45.42 (10.38)**	178.42 (18.33)	80.96 (10.13)	50.54 (8.98)	11.48 (3.08)	20.45 (4.21)	11.75 (2.47)
	More than 40	40.43 (8.10)	180.34 (20.35)	84.59 (12.16)	47.75 (8.04)	10.33 (3.09)	21.62 (4.27)	11.78 (2.74)
Parental Status	No kids	46.30 (10.01)**	181.65 (18.50)	82.21 (10.45)	51.65 (9.56)*	11.78 (2.27)	21.34 (4.35)	11.73 (2.11)
	With kids	41.14 (8.96)	178.11 (19.71)	83.04 (11.76)	47.80 (7.79)	10.90 (3.42)	20.85 (4.23)	11.78 (2.84)
Specialization	Social studies	43.42 (9.54)	179 (20.64)	83.53 (12.26)	49.17 (9.18)	11.02 (3.43)	19.97 (4.16)	11.97 (2.77)
	Others	41.77 (9.54)	180.33 (15.37)	80.72 (7.92)	49.16 (7.04)	11.72 (1.84)	23.77 (3.15)**	11.22 (2.01)
Experience	Less than 10 years	44.68 (10.15)*	179.85 (18.05)	82.14 (10.28)	50.26 (9.18)	11.21 (3.03)	20.92 (4.40)	11.97 (2.59)
	More than 10 years	40.04 (7.92)	178.54 (21.45)	83.79 (12.87)	47.29 (7.25)	11.20 (3.21)	21.20 (4.05)	11.41 (2.06)
Self-declared level of religiosity	Low	54.58 (5.40)**	194.08 (18.02)*	87.41 (11.79)	58 (8.50)**	12.33 (2.22)	21.41 (5.01)	12.08 (3.05)
	Medium	42.75 (7.65)	176.71 (18.02)	82.83 (10.72)	46.78 (7.27)	11.37 (3.25)	20.28 (4.30)	12.03 (2.07)
	High	36.66 (8.07)	175 (18.41)	79.80 (11.28)	47.76 (7.49)	10.33 (3.10)	21.95 (3.65)	11.19 (3.02)

Moderation analysis

To explore whether the level of self-reported religiosity has an effect on the association between the general attitude toward sexuality and the teachers' communication about sex education themes, a moderation analysis was conducted, using Process Macro for SPSS. The level of religiosity and general attitude toward sexuality accounted for a significant amount of the variance in the communication about sex education themes: $R^2 = .29$, $F(3, 61) = 9.91$, p<.001. After adding the interaction term, a significant proportion of the variance in communication was found, $\Delta R^2 = .06$, $\Delta F(1, 61) = 6.41$, p=.01, b = -.33, t(61) = -2.53, p=.01. From the examination of the interaction plot (figure no. 1), a diminishing effect of religiosity level was noticed, meaning that as the level of religiosity increased, the effect of general attitudes on the communication about sexuality with students decreased. At low attitudes, the communication was more probable for those with higher level of religiosity, while those with low level of religiosity tended to have low levels of communication

with students about sexuality. As the general attitudes became more positive, those with higher levels of religiosity tended to remain constant in their willingness to communicate, while the teachers with lower levels of religiosity had high willingness to communicate about

sexuality with students. The teachers with low self-declared level of religiosity, who had positive general attitudes about sexuality had the highest level of willingness to communicate with students about sex education themes.
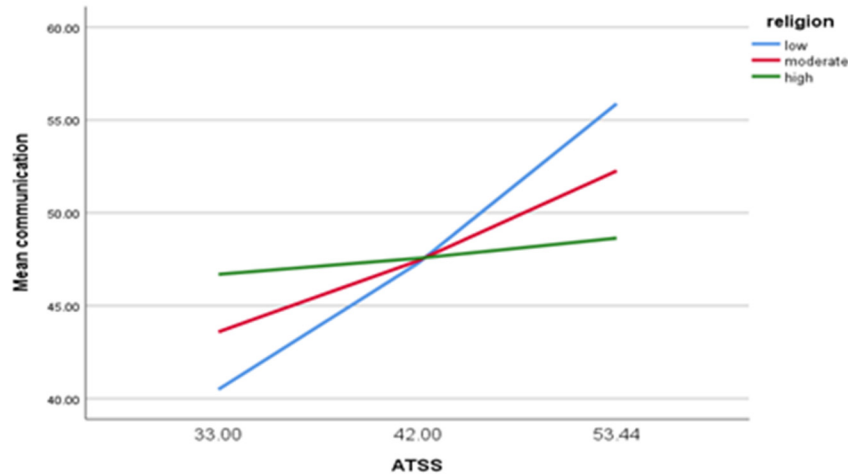

Figure no. 1. The interaction effect of religiosity on the attitudes toward sexuality and communication of SexEd topics with the students.

An interaction model was constructed in order to explore whether the level of experience in teaching (under and above 10 years) has an effect on the association between the general attitude toward sexuality and the teachers' communication about SexEd topics. The experience level and the general attitude toward sexuality accounted for a significant amount of the variance in the communication about sex education themes: $R^2 = .36$, $F(3, 61) = 16.55$, $p<.001$. After adding the interaction term, a significant proportion of the variance in communication was found, $\Delta R^2 = .14$, $\Delta F(1, 61) = 26.76$, $p<.001$, $b = .15$, $t(61) = -5.17$, $p<.001$, proving the

significance of the interaction effect. The examination of the interaction plot revealed a diminishing effect of the level of experience, meaning that higher levels of experience in teaching (above 10 years) accounted for lower level of willingness to talk about sexuality with students, despite more positive attitude toward sexuality in general. Teachers with more negative attitudes tended to exhibit more willingness to talk about sexuality when they had higher experience in teaching. The communication was more probable for those with more experience and a positive attitude about sexuality in general.
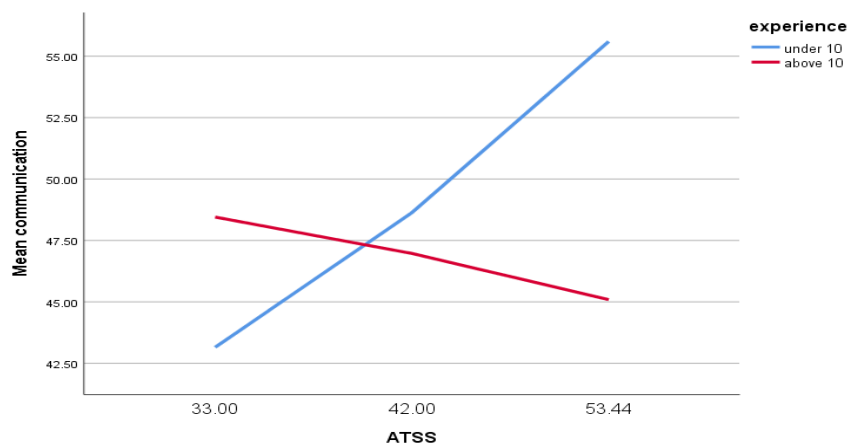

Figure no. 2. The interaction effect of experience on the attitudes toward sexuality and communication of SexEd topics with the students

3. Discussions

Our research investigated the correlates of the teachers' attitudes toward teaching sex education topics in special schools. We found that the general attitudes towards sexuality were significantly related to the teachers' attitudes towards teaching sexual education. In terms of age, the older participants proved to be more conservative, as well as those who had their own children.

The most significant negative correlation was found between the self-declared degree of religiosity of the participants and their general attitudes towards sexuality issues. Thus, the more religious the participants considered themselves to be, the more conservative they tended to be when approaching sexuality. The analysis of the results shows that teaching sexual education topics in special schools is more limited as the self-perceived level of religiosity is higher. In addition, if the respondents reported to be more religious, the openness for knowledge, the communication with students about sexuality issues, and their tendency to see the special school as a facilitator in the sexual education of children were more limited compared to those who perceived themselves as less religious. A significant interaction effect of the level of religiosity and the professional experience of the participants was found regarding the impact of the general attitudes about sexuality on the willingness to communicate with students about sex education topics. The participants that assessed their level of religiosity as high, tended to maintain a more conservative attitude towards teaching sex education topics, while those that assessed their level of religiosity as low exhibited a tendency to speak about sex education and their general attitude about sexuality was more positive.

The implication that we can derive would be that religiosity should be an important factor that needs to be taken into consideration when designing sex education training programs for teachers. Also, the development of a more positive attitude towards sexuality should not be the main objective of such programs, as for some teachers (in our study, those with higher religiosity), it did not account for an increase of the openness to communicate with students. Other factors need further investigation in order to improve the teachers' openness to talk about sex education topics.

Our findings indicate that the professional experience should be taken into account when designing SexEd teacher training programs, as it could be a relevant factor in the openness towards sexuality education. In our investigation, teachers with more years of experience were less open to talk about sex education even if they had a positive attitude about sexuality, while those with less than 10 years of experience were more opened as their general attitude toward sexuality was more positive. We conclude that for less experienced teachers (in terms of the length of their presence in special education institutions), more information about sexuality could be useful in order to increase their openness to talk with students, while those with more experience need other types of trainings in order to improve their willingness to teach sex education.

4. Limits

Consideration should be given to the low number of participants, especially male ones. In addition, our study was carried out only at the level of a single institution of special education in the country, so careful consideration should be given to the generalizability of our conclusions. Another limit of research is represented by the self-report measures used, in terms that it is necessary to consider the social desirability of the responses that the participants may give in completing the questionnaires. Providing control items or a scale on the level of social desirability could be a possible solution to implement in other investigations.

5. Future directions

A possible new research direction would be to include, by using a randomized sampling method, a larger number of participants from various special education institutions in the country, as well as pre-service teachers. At the same time, based on the results we obtained, intervention and training programs for teachers in the field of Special Education can be further developed to increase their knowledge of sexual education and help them facilitate the communication with students with moderate intellectual disabilities about sexuality issues, as well as with their tutors and/or parents. Another research direction refers to the qualitative analysis of the needs and difficulties faced by special education teachers, as well as their knowledge of the current ethical and legislative

frames, in order to prepare training programs or interventions in the field of sexual health education.

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Connections between Musical and Logical-Mathematical intelligences

Diana Elena Sârb

Connections between Musical and Logical-Mathematical intelligences

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Abstract	
Keywords: multiple intelligences; rhythm; harmony, musical forms; education.	Music is both science and art. It is an important component of human nature, existing in all cultures, generating joy and pleasure by means of interpretation or listening. Music is scientifically explained from Pythagoras, while connections between mathematics and music have been signalled since ancient times. Furthermore, nowadays we are also studying possibilities to streamline the functioning of the brain which involves relationships between different types of intelligences, corresponding to different cortical areas. Music is often referred to as the mathematics of sounds due to the numerous synapses that occur between the two fields of knowledge. The influence of mathematical concepts in music is mirrored by parameters such as musical rhythm, archetypal forms of musical creations as well as melody and harmony. However, the art of the musical sounds remains a universe with a strong presence of the emotional and of the creative side of the human being.

Zusammenfasung	
Schlüsselworte: multiple Intelligenzen; Rhythmus; Harmonie; musikalisches Form; Bildung.	Musik ist Wissenschaft und Kunst, sie ist ein wichtiger Teil der menschlichen Natur, sie existiert in allen Kulturen, generiert Freude und Vergnügen beim interpretieren und anhören. Musik ist wissenschaftlich erklärt von Pythagoras, Verbindungen zwischen Mathematik und Musik, überliefert seit der Antike bis heute, wo wir auch die Möglichkeiten zur Optimierung der Gehirnfunktionen studieren, welche die Beziehungen zwischen verschiedenen Arten von Intelligenzen, die kortikalen Bereichen entsprechen, beinhalten. Musik wird oft als Mathematik des Klangs beschrieben, aufgrund der zahlreichen Verbindungen die sich zwischen den beiden Gebieten unseres Bewusstseins bilden. Der Einfluss von mathematischen Konzepten in der Musik zeigt sich in Parametern wie dem musikalischen Rhythmus, den archetypischen Formen musikalischer Werke, aber auch in den Melodien und Harmonien. Mit alledem bleibt die Kunst der musikalischen Klänge ein Universum, in dem die emotionale und subjektive Seite des Menschen überaus präsent ist.

1. Introduction

Conventional wisdom has it that music is present in everyday life. Ever since ancient times scientists stressed the importance of music throughout the process of human evolution due to its beneficial effect visible at an emotional level (the simple pleasure of singing, playing or listening to music), social (rituals that accompany the main events of a human's life and involve the presence of music) as well at a cognitive level (the relationships that exist between music and other fields of science).

Along these lines, the great Greek philosopher and mathematician Pythagoras states that there is a certain geometry in the display of the mathematical sequences as music exists even in regard to the distancing of spheres. The symbiosis between these two fields is later on highlighted by opinions of researchers such as James Sylvester who considered that mathematics is the music of reason or Gottfried Wilhelm von Leibniz who thought that music is the mathematics of the soul which does not know that it is counting.

Ever since those times the evolution of the human kind has been studied from different perspectives. The study of human cognition has been a concern for many fields of expertise such as psychology, pedagogy, philosophy as well as the medical field especially in the last century. The evolution of the human being, their cognitive development, the possibility to delineate and forge the directions of intellectual progress accompanied by solid scientific evidence, they all lead to surprising findings of which one must be aware in order to master and guide further on the scientific advances. Teachers must master these findings and continue the directions of research in order to ensure the optimal evolution of all the fields of knowledge by means of the school curriculum.

2. Multiple intelligences. Musical and logical-mathematical intelligence

Neuroscience (French *neurosciences*), a domain derived from the advanced study in the medical field, provides multiple explanations for a better understanding of the brain and the ability to have neuronal connections in an original manner. The concept was coined in the early 1970s and it defines the pool of brain sciences such as: neurobiology, psychophysiology, psychobiology, neuroethology, neuropsychology, neurophilosophy. There is an attempt to integrate other areas of expertise such as psychophysiology, psychobiology and neurobiology within the field of the cognitive psychology (Popa et. al. 1993-2009).

Intelligence is defined by scholars as the psychological function or pool of functions due to which the organism adjusts to the environment elaborating original combinations of behaviors, acquires and employs new knowledge and eventually reasons and solves problems according to the rules that result from the information received by means of logic (Doron & Parot, 2006).

Romanian scholars in the field of psychology (Popescu-Neveanu 1978) explain the concept of intelligence as a *real fact as well as a potential one both in terms of it as a process and as aptitude or capacity, both as form and attribute of mental and behavioral organization.*

Being intelligent can be exteriorized in different ways due to the multiple abilities that people often manifest and employ in daily activities. The Intelligence Quotient (IQ) measured by means of standardized tests (aiming at language and logical-mathematical intelligence) usually targets intellectual dexterities related to words and numbers, skills used to memorize them and to relay different patterns, stressing lesser extent the social perspective, art, and nature.

Dr. Howard Gardner, Professor at Harvard University, concerned with the process of human learning (in young children as well as adults) proves that the concept of homogeneous school, i.e. a unidimensional vision of assessing human mind based on IQ is limited and he advocates for a new approach to learning completely different from the previous one which also generates a different conception of the school system. The new alternative is grounded in eight different types of intelligence and it encompasses a wide spectrum of the human cognition, as follows: linguistic, logical-mathematical, spatial, musical, naturalist, bodily kinaesthetic, interpersonal, intrapersonal (Gardner 2006).

Later on, Gardner explained the possibility of the existence of other types of intelligence, existential and naturalist, but these do not yet benefit from sufficient scientific underpinnings.

Regarding the two types of intelligences, Gardner briefly describes each one: logical mathematical intelligence is an ability to develop equations and proofs, make calculations, and solve abstract problems and music intelligence is an ability to produce, remember, and make sense of different pattern of sound. When describing the types of intelligence Gardner emphasizes the fact that they are independent the one from the other in the sense that a high level of mathematical intelligence does not also involve an enhanced musical intelligence which contrasts with the traditional standardized IQ tests, actually a correct assessment of human intelligence (Gardner 2006).

In order to render this explanation even more comprehensive, the author introduces the concept of cultural role which requires a plurality of intelligences. Therefore, a good violinist also needs, besides musical intelligence which provides him / her qualitative training, other types of intelligence as the interpersonal one, in order to create a bond with the audience as well as bodily-kinaesthetic skills in view of a better coordination of the movement of the hands, fingers and body.

In his turn, Dr. Thomas Armstrong (2011), conducting research in the field of human intelligence, wrote his book entitled *You're Smarter Than You Think*, which sets out to be a true educational guide in the field of self-awareness, for children as well as for teachers or parents. The book reveals some important aspects in the field of human intelligences:

- The categories of intelligence are different but equally important;
- Every dimension can be explored, developed, amplified;

- Intelligence expresses itself differently for each type;
- The human being is not limited to one type of intelligence, even though he/she might excel in one direction;
- There is an ongoing cooperation between the types of intelligence in our activities;
- The eight dimensions are to be found in all the cultures and at all ages.

The theory of the multiple intelligences broadens the spectrum of the possibilities of knowledge beyond the conventional methods employed in education (verbal and logical-mathematical).

Musical intelligence is affirmed when you truly love and appreciate music. It represents the ability to recognize and analyze sounds, rhythms, melodies, patterns, to be sensitive to the tones, to the qualities of the musical sound (intensity, duration, height and timbre), the ability to create and reproduce music, using musical instruments or the voice. This type of intelligence involves active listening, increased sensitivity to environmental sounds and requires a strong connection between music and the ability to respond emotionally to it. Musical intelligence is present when a person discovers the *melos* in the songs of the birds, in the rhythm and noises of the city, in the sounds produced by the machines in the factories, by the train ride but especially in the vocal song or an instrument interpretation (Armstrong 2011).

Logic-mathematical intelligence comes in two distinct forms. The first one, the logical dimension, is related to processes, reasoning (inductive or deductive), orders, classifications, cause-effect relations and problem solving, and it surfaces when a person makes certain deductions easily, formulates hypotheses and conclusions, even without following all the algorithmic process. The second, the mathematical dimension, refers to numbers, working easily with them, guaranteed success in activities involving numbers, and is evident when those who manifest this type of intelligence can easily make the process of calculating in their mind, they quickly notice certain relationships between numbers, they like to work with numbers.

3. The expression of the logical-mathematical elements in the musical field

The musical universe is an extremely prolific and strongly connected area with numerous scientific field sand this implies different perspectives of approach.

Connections to the field of mathematics are made at many levels, as illustrated in the descriptions below. Musicologist Iosiv Sava, speaking to composer and mathematician Ştefan Niculescu, highlights the presence of mathematics in the composition process and talks about its strong involvement in musical compositions (Niculescu, 1980). Later, as it happens in many areas, the human being was replaced by the computer and, based on special programs, musical compositions were generated. Of course, in the artistic field, the presence of the creative side of the human being is compulsory.

Niculescu (1980), speaking of the extension of the sound material, from the sinusoidal sound to electro-acoustic conglomerates, from the sounds of traditional instruments to everyday city noises (horn, screams), emphasizes the presence of some compartments of mathematical research, regarding the structure of the sound matter as well as the development of this sound variety in time.

3.1. Musical rhythm and mathematics

A fundamental dimension of music is the rhythm (along with the melody, intensity, tempo). Rhythm has been defined and studied extensively by specialists from different fields. Professor Constantin Rîpă analyzes and identifies *rhythm* (based on the Greek origin *reo* which designates *flow*) with the movement as a process or succession, everything happening in time, and formulates two definitions of it, at a macrostructural and a microstructural level (Rîpă, 2002).

Regarding the first category, rhythm appears as a perception of all the components of an entire movement. Transferred to the musical field, rhythm refers to the entire process of movement, incorporating all the musical parameters (duration, height, tempo, dynamics, timbre, harmony) in their complexity of forms. At a microstructural level, rhythm is reduced to durations, which implies establishing relationships in time from the musical development.

The study of the musical durations and their corresponding rests is made in strong connection with

numbers and with the field of mathematics. As sown in the next image, the mathematical links between durations

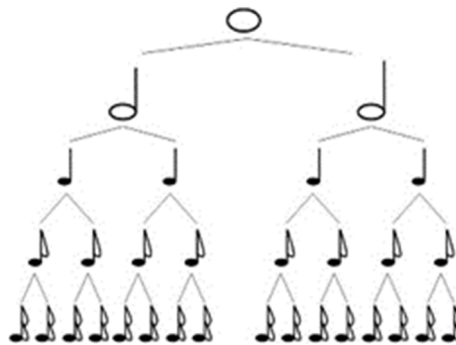can be easily established. On each line the total number of times calculated is four:

Figure no. 1. Musical durations

The same happens in the musical meter, known as measuring the succession of accents and durations, which is based on the musical rhythm, but the meter refers to a programmed succession of these musical accents. Thus, in the 2/4time signatures the accent comes with every

second beat, while in the 3/4 time signatures the accent comes with every third beat and the 4/4 time signatures have two accents: a main accent that repeats at every four beat and a secondary one, the third beat of each measure.

Figure no. 2. 3/4 time signatures

As illustrated in figure 2, at the beginning of each staff the time signature is written after the clef and key signature. The image of time signatures looks like two numbers arranged like a fraction. This sign tells us how the music construction is to be counted. The top number 3, which is written above tells us how many beats to count. The bottom number 4 tells us what kind of note to count in each measure.

By changing a variable, the same ternary bar can have number 8 as a type of note to count (number 8 below, which is half of the quarter), which implies new organizations of the rhythmic material. Adding another change, number 6 on top, the system will be different, and a time signature of 6/8 means count 6 eighth notes to each bar. Suddenly the system changes, the initial data, and the music is organized from a different perspective: 6/8 is grouped into 2 groups of 3 eight notes and 3/4 time would be grouped into 3 groups of 2 eight notes. The people characterized by a high level of mathematical intelligence will easily find opportunities to combine durations and rests or to think in this new system.

3.2. Involving numbers in musical harmony

Musical harmony approaches the musical field at a technological level. Its object is the study of the chords and their succession, as well as the learning of the technique of harmonizing a song (Marcu, 2014).

The second great dimension of music, together with rhythm, is the melody. Studying the pitch of musical sounds is an important part of music, representing the basis for practicing music. Mathematics is already involved by establishing the level of pitch between sounds. Pitch in music is the position of a single sound in the complete range of sound. Sounds are higher or lower in pitch according to the frequency of vibration of the sound waves producing them, a phenomenon that is based on many mathematical and physical concepts.

After acquiring the musical notes, the musical intervals are learned, which implies the succession (melodic interval) or the overlap (harmonic interval) of two sounds.

Intervals involve high level of mathematical knowledge. Musical consecrated notes (do, re, mi, fa, sol, la, si and do repeated at octave) are numbered with Roman numerals from I to VIII and the musical intervals, the distance from one note to another, with Arabic numerals.

Intervals stand for special distances between any two notes. Each interval will have a number - 1, 2, 3, 4, 5, 6, 7, 8. These numbers are the distance between two notes, based upon counting the lines and spaces on the staff (De Voto, 2007).

Figure no. 3. Musical Intervals

In music, the chords involve playing three sounds (at least) simultaneously, arranged as third (root position, fourth or second).
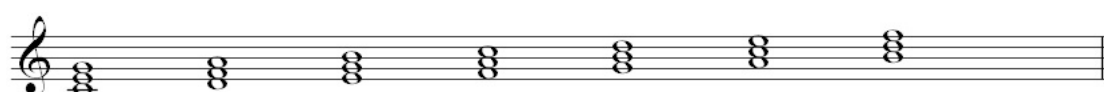
Figure no. 4. Chords in Do major scales

A chord is said to be in its root position when its root is the lowest note. A three-note chord or triad may also stand in its first or second inversion. A chord stands in its first inversion when its third is the lowest note. It is in second inversion when its fifth is the lowest note. In the following example, the major triad of C stands in its root position and first and second inversion respectively:
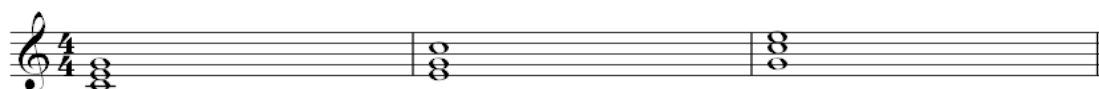
Figure no. 5. Chords-root position, first and second inversion

All these organizations of the sound material require an increased ability to work with figures, series, strings all of them being core mathematical concepts.

4. Conclusions

Music is both science and art, it is an important component of human nature, existing in all cultures, generating joy and pleasure by means of interpretation or listening. Music is scientifically explained from Pythagoras, while connections between mathematics and music have been signalled since ancient times. Furthermore, nowadays we are also studying possibilities to streamline the functioning of the brain which involves relationships between different types of intelligences, corresponding to different cortical areas.

Music is often referred to as the mathematics of sounds due to the numerous synapses that occur between the two fields of knowledge. Thus, it becomes a valuable tool for the analysis of some essential structural elements of the human personality, as cognition, the affectivity, by highlighting some brain mechanisms. The neuropsychological investigations realized in the last century guided us to the development of maps of the brain areas and their functions and the identification of the areas responsible for certain cognitive operations (Levitin, 2010). These areas correspond to different types of information.

Mathematical sciences benefit from strong transfer qualities with high applicability. Based on the elements of mathematical thinking, children (adults as well) develop certain general faculties used for learning: the capacity of logical thinking and of creative initiative (Csire, 1998), which demonstrate the presence of a high level of mathematical intelligence. This transfer effect applies to

several areas of knowledge, including music, and it's visible in parameters such as musical rhythm, melody, harmony.

However, the art of the musical sounds is still a universe which embodied at the highest level the emotional and subjective side of the human being and the mathematical field doesn't provide qualities such as musical imagination, a specific human characteristic (Niculescu 1980).

In order to ensure the progress of a society, the need for multiple intelligences arises, due to the variety of our activities. It can start from the approach of education in school. It is important to balance the use of multiple intelligences, to pay more attention to children with artistic or naturalistic skills, but also to children often described as having learning problems or attention issues during activities. All of them, because of their special thinking, should be encouraged to express themselves in their special areas in order to obtain optimum performance.

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Electronic portfolio – a must have for students in the digital age

Constantina Catalano

Electronic portfolio – a must have for students in the digital age

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Abstract

Keywords:
talented electronic portfolio, higher education, e-learning.

In this paper we aim to capture the trends of using the digital portfolio as a form of learning and evaluation of students. The portfolio, as a modern approach to teaching assessment strategies, has gained popularity in the activity of higher education. As expected, postmodern accents of digitization lead to the transfer of the classic, printed portfolio into the electronic portfolio (also known as e-Folio, e-portfolio, E-Folio, or online portfolio).
In order to validate the students' willingness to work with digital portfolios, we asked a short online questionnaire, with 4 questions that focused mainly on the working experience of students on these portfolios, either classic or digital. A number of 310 students in their second and third year of study answered the questionnaire. The respondents are currently students of several faculties at Babes-Bolyai University. We believe that the openness of students to whatever involves using technology and devices is very large and we should take advantage of it.

Zusammenfasung

Schlüsselworte:
Elektronisches Portfolio, Hochschulbildung, Online-Lernen, e-learning.

Diesen Artikel versucht die Trends von der Verwendung eines digitalen Portfolios als Lern- und Bewertungsform von Schülern zu erfassen. Das Portfolio als moderner Ansatz zur Vermittlung von Bewertungsstrategien nimmt in der Hochschultätigkeit einen wichtigen Platz ein. Die postmodernen Akzenten der Digitalisierung haben dazu geführt, dass das klassische Portfolio von den elektronischen Portfolio (auch als e-Folio, e-Portfolio, e-Folio oder Online-Portfolio bekannt) ersetzt wurde.
Zu bestätigen, dass die Schüler vorbereitet sind, mit einem digitalen Portfolio zu arbeiten, haben wir einen kurzen Online-Fragebogen mit 4 Fragen zu den Arbeitserfahrungen der Schüler mit Portfolios (klassisch oder digital) gestellt. Eine Anzahl von 310 Studenten, in ihren zweiten und dritten Studienjahr, haben die Fragen beantwortet, die sind jetzt alle Studenten an verschiedenen Abteilungen der Babes-Bolyai-Universität. Wir glauben, dass die Studenten sehr offen sind, wenn es um den Einsatz und Arbeit mit digitalen Medien geht, deswegen sollen wir es (ausnutzen und) ermutigen.

1. Introduction

In recent years, the current didactic activities frequently integrate the specific means of information and communication technology (ICT) and NICT (New Information and Communication Technologies) in the strategies chosen for various school disciplines, not only for those that are based exclusively on this component.

Initially, the computer was used only at computer hours, or sometimes, in other disciplines. Nowadays, any classroom has at least one such device. The generation of digital natives has the openness to use these tools extensively and efficiently, which greatly facilitates the educational process. Thus, the computer or its substitutes (laptop, phone, tablet) equipped with Internet are an integral part of the usual teaching activity. The use of these means in the classroom is often implicit and less declarative as it was until recently.

The ICT-assisted teaching activities involve both teaching-learning and assessment. The design of the teaching activities sometimes starts from this current strategic component because the lesson may involve the use of an educational software, a specific platform or a specific application. These can replace the classical lesson itself or serve as a didactic approach or methodology complementary to the traditional ones.

The current approaches delimit new areas of technology for education beyond the E-learning area by expanding the ICT domain to M-learning. Mobile learning is "a new paradigm, which creates a new educational environment, through which educators have access to course supports, instructions and applications anytime, from anywhere" (Cucoș, 2006, p. 144). In addition, we would say, it represents a repositioning of the E-learning in the mobility area due to the massive increase in the number of users of mobile phones and tablets, but

also the decrease of the age of users (most of the students from high school or gymnasium having such a device). M-learning is easy to integrate into various activities, in formal or non-formal education, thanks to the available applications, the frequent improvement of the existing versions of these applications, but also through the emergence of various social networks, group communication platforms etc.

2. Theoretical foundation

The challenges of the students of the third millennium increase year by year. The amount of information to be assimilated is constantly growing, the time allocated to the initial training has decreased in most of the specializations from four to three years of study and the range of skills needed for professionalization is increasing and so on. The consequence of these continuous challenges on students and university teachers translates to the current university practice in approaching new strategies of training and education, in diversifying working methods, in promoting virtual educational environments.

The intellectual activation of the students is a priority in the context of the new approach, but also the initiative of the teachers to ensure didactic strategies according to the context is a desired one, according to the demands of the post-modern education (Catalano, 2019).

The academic education has some special characteristics, which differentiate it from the profile of the pre-university one. The features that are highlighted in this context are those regarding the specificity of the forms of organization of the teaching activity (course, seminar, practical work, laboratories, etc.) at the level of the specific education methods (the lecture, exposition, conversation and so on) or at the level of the evaluation (semester written works, oral examinations, partial verifications, micro research projects, portfolios etc.).

The portfolio, as a modern approach to teaching assessment strategies, has gained popularity in the activity of higher education. As expected, postmodern accents of digitization lead to the transfer of the classic, printed portfolio into the electronic portfolio (also known as e-Folio, e-portfolio, E-Folio, or online portfolio).

"An e-Portfolio (electronic portfolio) is an electronic collection of evidence that shows your learning journey over time. Portfolios may relate to specific academic fields or your lifelong learning. Evidence may include writing samples, photos, videos and research projects, observations by mentors and peers and/ or reflective thinking. The key aspect of an e-portfolio is your reflection on the evidence, such as why it was chosen and what you learned from the process of developing your e-portfolio." (Barrett, 2010, p. 6). Such electronic evidence may include input text, electronic files, images, multimedia, blog entries and hyperlinks.

An electronic portfolio is not a specific software package, but rather a combination of process (workplace) and product (showcase). Presentation portfolios can be created using a variety of tools, both static, desktop and online (Barrett, 2010).

E-portfolio is seen by H. Barrett as Storage space – collection updated regularly – (weekly/ monthly) with focus on contents & digital conversion, as Workspace/ Process with focus on process and documentation of learning and also as Showcase/ Product - selection/ reflection, direction, presentation (each semester/ end of year) with focus on product & documentation of achievement (Barrett, 2010).

Benefits of e-portfolio for students as process (Barrett, 2011): the students can discover a valuable exercise in self-assessment through the reflection process; learning can take on a new depth through the reflection process; self-esteem and self-confidence of the students will be enhanced as they take control of their learning; assessment of their learning may become more student centered because the learner is involved and authorized to make decisions about will be evaluated.

Benefits as the product (Barrett, 2011): students will have a tool for personal development and a personal learning record; they may receive credit for informal and non-formal learning as well as formal learning; students will have a tool for feedback from teachers and peers.

Self-evaluation is a dimension present as well in the evaluation process of digital portfolios due to the fact that the continuous monitoring, validation or improvement of the selected contents is implicit, until the moment of its delivery.

Another dimension of the benefits that e-portfolios may provide refers to metacognition through periodic reflections which help students to exercise those qualities that involve critical thinking or decision making. Also,

this strategy helps learners to build personal and academic identities as they complete projects and facilitate the integration of learning. Students have the chance to connect learning over a time period, to develop some abilities and to plan their own academic direction as they come to see what they know and what they still need to learn or exercise (Miller & Morgaine, 2009).

Apart from the benefits we already listed, the portfolio has some recommendations for use and has some limitations that keep it away from some students or teachers. These refer to some tendencies to limit access to mobile devices for young people, to resurrect the reading of books, to study in physical libraries etc. We believe that these do not exclude the use of the digital portfolio, but we should keep in mind to offer the possibility for the students to access various sources and increase the attention in the composition of this category of portfolio.

3. Research methodology

We consider that it very important to introduce technology in the complex process of teaching-learning-evaluation in higher education, which is why we want to find out if the digital portfolios are already being used by our students and which is the trend of giving up the classic, printed portfolios, in the future. So, we wanted to make a preview about the issues concerned: the tendencies for digital portfolio versus classic portfolio.

In order to validate the students' willingness to work with digital portfolios, we asked a short online questionnaire, with 4 questions that focused on the working experience of students on these portfolios, either classic or digital. The student questionnaire was developed using Google Forms. Also, the answers were collected and processed on it.

A number of 310 students in their second and third year of study answered the questionnaire. The respondents are currently students of several faculties at Babes-Bolyai University (FPSE, FIF, FSEGA, and FSPAC). All of the respondents are preparing to become teachers, because they are students either in the specialization of the pedagogy of primary and preschool education or they are enrolled in the pedagogical module. The students from first year were not included because at the beginning of the university studies (first semester) they have not experienced yet many approaches such as assessment or learning strategies.

The survey included 4 questions. Depending on the answer given to the first question, it was divided into two subdivisions: the Digital Portfolio and the Classic Portfolio. The answers with most respondents were highlighted.

4. Results

During the faculty it is a common practice for students to make portfolios for the purpose of assessment, or during the semester as a form of learning.

Most often the content of the portfolio dedicated to a particular discipline is established by the teacher at the beginning of the activity or set as a form of final evaluation or a current one.

Sometimes the portfolio is made by the student on his own initiative as a collection of information, materials, presentations etc. for one or more disciplines.

The first question concerned students' experience with portfolios in general.

1.   Have you used the digital or classical portfolios so far for various disciplines?

Table no 1. *Regarding the answers of the question number 1*

Answer	**Digital Portfolio- DP**	**Classic Portfolio- CP**
Number/percentage of students	81 (25.8%)	**229 (74.2%)**

As expected, most students experienced the classic portfolio. So to this question there were 81 (25.8%) answers in favor of the Digital Portfolio (DP) and 229 (74.2%) for the Classic Portfolio (CP).

It is observed that although many of the contents presented in the portfolios are tasks of research

documents, presentations or other topics that involve the use of the computer, in the end it is required to put them together to make that printed portfolio.

Another issue addressed by us in this questionnaire refers to the stated purpose of the portfolio, whether it is classic or digital.

That is, whether it is used for learning or evaluation. In the first instance, the portfolio is valued for evaluation, formally appearing as a form of evaluation. "The portfolio is a form of complex, longitudinal evaluation, designed in a long sequence of time, which offers the possibility to issue a value judgment, based on a set of results." (Cucoș, 2008, p. 140).

But in the perspective of digitalization of the process, we find a refined opinion on this aspect. Hence, electronic portfolio is a "personal digital collection of information that describes and illustrates knowledge" (Catalano, 2018, p. 114). We see that between the two definitions we have a subtle difference in approach: the classical portfolio generally aims at evaluation and results, and the electronic one supports the construction of knowledge.

The second question was (for both subdivisions):

2. *Was the digital/classic portfolio used as a form of learning or assessment?*

The answers were as follows:

Table no 2. *Regarding the answers of the question number 2*

Answer	Section 1- DP (81 students)	Section 2- CP (229 students)
Evaluation	31 (38.3%)	**167 (72.9%)**
Learning	**48 (59.3%)**	56 (24.5%)
Other (both-evaluation & learning)	2 (2.5%)	6 (2.6%)

In higher education, portfolios are used primarily for evaluation purposes, but the dimension that they have is much more complex, because the development of a portfolio requires active involvement in the learning activity and especially in the selection of information and information sources.

We note here that students who worked with classic portfolios developed them for evaluation purposes, and those who used digital portfolios used them as learning tools. Here we observe the nuance that differentiates the two approaches of the portfolio. The digital one extends the possibility to personalize the contents and to use multiple ways to build it.

For either, digital or classic portfolio, we have about the same percentage (2.5% - 2.6%) in which students claim to have used the portfolio for both processes, evaluation and learning.

The third question referred to the students' preference for the preferred portfolio category:

3. *Do you prefer the digital portfolio to the classic one?*

The answers were as follows:

Table no 3. *Regarding the answers of the question number 3*

Answer	Section 1- DP (81 students)	Section 2- CP (229 students)
Digital	**69 (85.2%)**	72 (31.4%)
Classic	12 (14.8%)	**157 (68.6%)**

To this question we expect that most of those who worked on the digital portfolio would answer that they would like to work in this way and those who have worked with the classic portfolio would want to work in the classical way. Most have responded this way, indeed. But we find that many (31.4%) of those who worked in the classical way, want to work digitally and that some (14.8%) of those who worked electronically prefer the classic version.

We believe that for those who worked in the classic portfolio version, it was easier to stay to what they already knew. Perhaps the challenge of working in the digital is too abrupt for some students. On the other hand, we noticed that at the end of the questionnaire, among those who did not work with digital portfolios until that time, were persons who would try this approach as well in the future.

The last question was:

4. *Would you be willing to make digital portfolios in the future/as well?*

The answers were as follows:

Table no 4. *Regarding the answers of the question number 4*

Answer	Section 1- DP (81 students)	Section 2- CP (229 students)
yes	**76 (93.8%)**	**215 (93.9%)**
no	5 (6.2%)	14 (6.1%)

At the last question we tried to capture the students' desire to work only with digital portfolios. The majority percentage was favorable to this way of working with the e-portfolio, which is a strategy often used in academic learning and evaluation.

5. Discussions

The good news is that most students, 291 out of 310 (90.2%), total from both sections, regardless of the subdivisions of the questionnaire answered (DP or CP), at the final question answered that they would like to work digitally. We think that it would be important for teachers to give them the chance to work this way. It is also to be noted that everyone who answered the questionnaire is preparing to become teachers, so we outlook that they already have a vision for the future.

We believe that the openness of students to whatever involves using a device is very large and we should take advantage of it.

If we were to identify some limits of our brief investigation, it is the limitation in the selection of the students, their number and the lack of argumentation of their answers. This study that we proposed is only a preview of students' willingness to change a relatively simple and long-term benefit, the transaction from classic to digital portfolio.

But, the big challenge for all the students will be to ask their teachers to accept they will work only digitally for the tasks or assignments that involve the elaboration of a portfolio.

6. Conclusions

The answers to this questionnaire confirmed that the teachers are still working on the traditional model with the majority of the students. The percentage of those who have worked on digital portfolios is small, but existent, which gives us hope that students and their teachers are ready for new challenges.

We have reviewed the numerous benefits of using the portfolio above: making use of the technological part, organizing learning, assessment or both, keeping work in digital format, even saving the trees and so on, but the big challenge for the teachers is to find the magic formula that keeps the interest of the students for their discipline. And one of the greatest attraction of the last years is obviously the use of technology on different devices, networking applications, etc. So, maybe that could be the key to the students' mind and heart: to give them the possibility to make decisions, to choose contents, to search for information or do research online by using the virtual library, learning to select sources correctly, choosing the most suitable working tools, making presentations, videos, blogs, documents or anything that can be included in an online portfolio.

Therefore, the statement is reinforced, we cannot have quality in education without supporting progress and encouraging the use of strategies that include technology.

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The Main Topics of the Lectures for Parents. An Analysis of the Planning Documents of Primary School Teachers

Diana-Crina Marin & Mușata Bocoș

The Main Topics of the Lectures for Parents. An Analysis of the Planning Documents of Primary School Teachers

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Abstract

Keywords:
lectures for parents, parenting, the educational program for parents, educational counseling

This study contains an analysis of the main topics of the sessions of counseling and guidance that are offered for the parents. We have identified 46 documents which contain the planning of lectures for parents. The documents were created by primary school teachers from Romania and have been published in the last 10 years on an online platform that is frequently used by primary school teachers. The platform was developed for the optimum experience exchange of the teachers of Romania. We were interested to find out what are the main topics of the lectures for parents and other counseling activities which are frequently held during the collective meetings with parents. We have discovered that most of the lectures for parents could be associated with the following domains: health and balanced nutrition, the impact of New Information and Communication Technologies on children's education, the education of children in the school space, the affective climate and the education of children in the family space, emotional balance and prosocial behaviours, individual and age particularities of the students (learning style, type of intelligence, qualities, abilities, preferences), and school-family collaboration. This study has revealed that at the beginning of the primary school cycle, the most frequent topics of the lectures for parents are: the education of children in the school space and school-family collaboration. At the same time, at the end of the elementary school cycle, the individual and age particularities of the students (learning style, type of intelligence, qualities, abilities, preferences) and the impact of New Information and Communication Technologies on children's development are given special importance.

Zusammenfasung

Schlüsselworte:
Lektorate für die Eltern, Parenting, Programm der Elternvorbereitung, Erziehungsberatung

Diese Studie beinhaltet eine Analyse der Hauptthemen der Beratungs- und Anweisungssitzungen, die den Eltern angeboten werden. Es wurden 46 Dokumente identifiziert, die die Planung der Lektorate für die Eltern umfassen. Die Dokumente wurden von den Lehrern der Grundschulen aus Rumänien erstellt und in den letzten 10 Jahren auf einer Online- Seite veröffentlicht, die von den Lehrern, die in den Grundschulen unterrichten, häufig benutzt wird. Diese Seite wurde entworfen, um einen Erfahrungsaustausch der Lehrer aus Rumänien zu ermöglichen. Wir waren interessiert zu erfahren, welche die wichtigsten Themen der Lektorate für die Eltern und anderer Beratungstätigkeiten sind, die oft während der Sitzungen mit den Eltern durchgeführt werden. Wir stellten fest, dass die meisten Lektorate für die Eltern mit den folgenden Bereichen verbunden werden könnten: die Gesundheit und die ausgewogene Ernährung, die Auswirkung der neuen Informationstechnologien und der Kommunikation auf die Kinderausbildung, die Ausbildung der Kinder in der Schule, das affektive Klima und die Erziehung der Kinder in der Schule, die emotionale Ausgeglichenheit und die prosozialen Verhalten, individuelle und Altersbesonderheiten der Schüler (Lernstil, Intelligenztyp, Eigenschaften, Fähigkeiten, Vorlieben) und die Zusammenarbeit zwischen der Schule und der Familie. Die Studie zeigt, dass am Anfang der Grundschule die folgenden Themen die häufigsten im Rahmen der Lektorate für die Eltern sind: die Erziehung der Kinder in der Schule und die Zusammenarbeit zwischen der Schule und der Familie. Gleichzeitig wird am Ende der Grundschule eine besondere Bedeutung den individuellen Besonderheiten der Schüler (Lernstil, Intelligenztyp, Eigenschaften, Fähigkeiten, Vorlieben) und der Auswirkung der neuen Informationstechnologien und der Kommunikation auf die Kinderentwicklung gewährt.
Schlüsselwörter: Lektorate für die Eltern, Parenting, Programm der Elternvorbereitung, Erziehungsberatung

1. Introduction

This paper contains an analysis of the planning documents elaborated by primary school teachers to offer guidance and adequate support to parents. In the Romanian education system, the lectures for parents are usually organized during the parents' collective meetings. We were interested in finding out which were, for parents, the most important topics tackled in a lecture suggested by primary school teachers. This inventory of themes and activities would be useful to school counselors and primary school teachers interested in offering guidance and support to parents. In Romania, very few studies about the content of the educational programs and lectures for parents have been published.

2. Theoretical foundation

The education for family life is essential since "the relation with the family is an important element of the counseling activity, the family's implication in school life being realized under the form of participation to parents' meetings, lectures, main teaching classes or in any other activity from or outside the curriculum." (Dumitru, 2015, p. 1083). Pedagogical lectures have a decisive role in enhancing actual parental practices. We consider that effective lectures for parents should fulfil similar conditions as interactive and active learning activities. "A good lecturer must have audience appeal, warmth, friendliness, and confidence. He must speak in a voice which is clear and easily understood." (Lunenburg & Irby, 2011, p. 7). Primary school teachers' activity is very complex. Every teacher who works with elementary school pupils offers services of guidance and counseling to the parents and the children enrolled in his class (Masari, 2010). Nkechi, Ewomaoghene & Egenti (2016) outline the importance of the role of guidance and counseling activities performed in the school environment. Some of the most important benefits are: helping educational actors to fulfil their whole potential, putting the bases of a strong education, constructing positive behaviours, facilitating school inclusion, developing positive interpersonal interactions and eliminating all the barriers to the children's success in life and at school (Nkechi, Ewomaoghene & Egenti, 2016; Paisley & McMahon, 2001; Wilson, Hall & Hall, 2007). The role of the school counselor and the primary school teacher in developing the actual knowledge and abilities of parents is crucial. Therefore, all the persons involved in children's education should be interested in their continuous improvement and self-training.

The main legislative documents from Romania which contain information about the relationship that should be established between school and family are the Law of National Education (Law no. 1/ 2011) (Legea Educaţiei Naţionale nr. 1/ 2011) and the Framework Regulation for the Organisation and Functioning of the Secondary School Units (approved by Order no. 5079/ 31.08.2016) (OMENCS nr. 5079/ 31.08.2016). The study conducted by Marin & Bocoş (2018), revealed that according to the school principals' and the teachers' opinions, organizing meetings and lectures with the parents is one of the most effective strategies for consolidating the school family-partnership. Bastemur & Bastemur (2015) considered that online counseling has multiple advantages, but significant challenges can also be encountered. It is unanimously accepted that the family climate and the degree of family involvement in children's education has a decisive influence over the pupil's development (Bodovski & Youn, 2010). Several Romanian websites provide advice for parents and examples of good practices regarding children's education. For example, the website www.suntpărinte.ro contains, in the section "Primary education" a series of articles regarding the education and the harmonious development of the children that could be used by parents/ primary teachers/ school counselors. One of the factors that emphasize the importance of school guidance and counseling activities realized by primary school teachers is the small number of school counselors in the schools from our country.

3. Research methodology

The investigation was conducted between the 1ˢᵗ and the 10th of October, 2019, using the platform www.didactic.ro. This site contains various educational resources created by teachers and is one of the most frequently accessed online platforms by teachers in primary education from our country. We consider that the main advantage for using teaching platforms and other groups on social networks is the exchange of experience and good practices, with a significant impact on the teaching-learning-evaluation processes. The "Advanced search" option was used to identify materials published in primary education in the last 10 years (2009-2019). The following keywords were used: parents (346 results), parent (39 results), lectureship (23 results), meeting with parents (77 results) and family (274 results). Among the didactic resources identified there were 46 articles on planning lectures/meetings with parents and 6 projects that included complex activities with parents, known as "parents' school".

4. Results

In table no. 1, it can be observed that in the preparatory, I and II classes greater attention is paid to the topics in the fields:

- School-family collaboration;
- The education of children in the school space;
- Health and a balanced nutrition;
- The affective climate and education of children in the family space;
- Emotional balance and prosocial behaviors.

In the third and fourth grades, the following topics of the lectureships with parents have been included most frequently in the planning carried out by the teachers teaching in primary education:

- The impact of New Information and Communication Technologies on children's education;

- Individual and age particularities of the students (learning style, type of intelligence, qualities, abilities, preferences).

The affective climate and education of children in the family space.

Table no. 1. Topics of the lectures with parents, corresponding to each of the primary school classes

The topic of the lectures	Preparatory grade	First grade	Second grade	Third grade	Fourth
Health and a balanced nutrition	✓	✓	✓		
The impact of New Information and Communication Technologies on children's education				✓	✓
The education of children in the school space	✓	✓	✓		
The affective climate and the education of the children in the family space	✓	✓	✓	✓	✓
Emotional balance and prosocial behaviours	✓	✓	✓		
The individual and age particularities of the students (learning style, intelligence type, qualities, abilities, preferences)	✓			✓	✓
School-family collaboration	✓	✓	✓		

Table no. 2 contains the titles of some of the most frequently organized lectures for parents by the primary school teachers in Romania.

Table no. 2. Examples of titles of the lectures for parents

The topic of lectures	Title of lectures
Health and a balanced nutrition	It matters what, not how much you eat! Health - the most valuable thing Hygiene rules and strategies to combat transmissible diseases The role of daily physical activities Children's mental health. The effects of intellectual overload on children Protection in the event of natural disasters Healthy behaviour and risky behaviour Road safety education. Accident prevention strategies
The impact of New Information and Communication Technologies on children's education	The influence of the media on the behaviour and health of the students The Mobile Phone - A Necessity Or A Muff? The Internet - friend or foe? Virtual aggression
The education of children in the school space	The rights and obligations of schoolchildren The role and importance of extracurricular activities (Stimulating students' creativity through extracurricular activities) The importance of participating in school competitions
The affective climate and the education of the children in the family space	Positive discipline (Praise and punishment; Management of parent-child conflicts; No aggression in the parent-child relationship!; Life without violence!; Prevention and correction of children's misconduct) Leisure management (Home exercise - a component of the learning activity; The educational values of leisure activities; Educational influences exercised by the media; The organization of leisure time; Quality time spent by parents with children; How we organize children's time on vacation) Effective communication - the path to student success in teaching (How to find the

	"key" to the child's soul "; The secrets of the power of words)
	How to help our children with homework? (The role and implications of homework; Homework – a component of the learning activity)
	The key roles of parents in education (The job of being a parent; Rules for being a good parent; The power of the family example)
	Parental styles and their consequences
	Further reading, a source for the enrichment of the vocabulary (Family friendship starts with reading a book; My child in the world of books)
	Strategies for developing the interest in knowing the child
Emotional balance and prosocial behaviours	The child's entourage, the friendship relations and the development of the child's social autonomy (Collaboration or competition? How do we teach the child to be a good colleague?)
	Volunteering - an act of charity (Let's learn to give!);
	Good manners in children (Rules of civilized behaviour); Ways of developing empathy and tolerance
	What are the behavioural patterns of children?
	How do we help the schoolchild overcome his/her shyness? Emotional management / How do we educate the emotional intelligence of children?
	The development of self-confidence and self-esteem in schoolchildren
	The effects of parental migration on the emotional state of children
	Negative student behaviour. The aggression of young school-age children
The individual and age particularities of the students (learning style, intelligence type, qualities, abilities, preferences)	How well do we know our children? (The qualities, abilities, and aspirations of my child)
	Learning styles (How does your child learn?)
	The specificity of my child's age (School ages)
	The multiple intelligences of the young school-age student
School-family collaboration	The collaboration between the school and the family – an essential condition for the teaching act (Family and school - determining factors in the development of the child; Factors that can influence success and failure at school)

Taking into consideration the planning documents that we have analysed and which made reference to the counseling activities published online, it appears that parents are most often asked to complete questionnaires regarding:

- the family climate of the children and the disciplinary techniques used;
- the quality of school-family collaboration;
- the quality of family involvement in school life/children's education;
- children's preferences, abilities, and desires;
- the daily programme of the pupils;
- the carrying out of homework assignments etc.

5. Discussions

In the preparatory class, the teachers who teach in the primary education pay special attention to the factors that contribute to a good adaptation of the children to the school requirements and the creation of an authentic partnership between the school and the family. In the first grade, during the sessions and lectures with the parents there were proposed topics that addressed the specificity of the assessment in the primary classes and strategies for carrying out homework. In the second and fourth grades, aspects related to the effective preparation and the content

of the National Assessment exams were discussed. In the second, third and fourth grades, the advantages of involving students in as varied as possible extracurricular activities and the risks and advantages of the frequent use of new technologies were debated. Future studies should investigate the opinion of the parents who have pupils enrolled in each level of the primary school system as regards the relevance and utility of each of the lectures topics for parents identified in this research article. The results of these investigations would be very useful in improving the counseling and guidance activity conducted by primary school teachers.

6. Conclusions

We have discovered that, at the beginning of the primary school cycle, the most frequent lectures topics for parents were: the education of children in the school space and the school- family collaboration. At the same time, at the end of the elementary school cycle, the individual and the age particularities of the students (learning style and type of intelligence) and the impact that new technologies have on children's development are granted special importance. We have come to the conclusion that some of the lectures for parents are constructed in an interactive manner, which allows parents to participate effectively in activities. Others involve the use of new information and

communication technologies so as to create more attractive formative and informative learning situations for parents.

Authors note:

The authors have equal contributions to this article.

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The role of educational reward in the process of learning

Mircea Cătălin Dîrţu, Bogdan Neculau & Camelia Soponaru

The role of educational reward in the process of learning

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Abstract	
	Unfortunately, since the first theory of scientifically grounded learning has emerged and up to present theories, there are two minuses that directly affect the status of the reward. A first drawback is that psychologists and researchers in the related fields have not yet reached an agreement regarding the role of reward in the process of learning. If some of them praise it up to the skies while others put a blame on it, one can only ascertain that the role of reward is so complex that it is not thoroughly understood, yet.
Keywords: Reward; Learning theories; Education; Educational psychology	The second matter is related to the first and it seems to be more serious. It refers to improper communication, deficient to the educational specialists and, why not, to the general public, of the major discoveries made by the researchers regarding the importance of reward for the proper course of the learning process. That is why, the aim of this article is not only to present the stage the researches on reward and their interpretation are in, but also to particularly present them in a form that is more accessible to all those involved in the educational process, in expectation that the information comprised herein will be useful and easier to apply.

Zusammenfasung	
	Leider gibt es seit dem Aufkommen der ersten Theorie des wissenschaftlichen fundierten Lernens und bis zu den heutigen Theorien zwei Minuspunkte, die sich direkt auf den Status der Belohnung auswirken. Ein erster Nachteil ist, dass Psychologen und Forscher in verwandten Bereichen noch keine Einigung über die Rolle der Belohnung im Lernprozess erzielt haben. Wenn einige es in Ruhm erheben, während andere es beschuldigen, können wir nur sehen, dass die Rolle der Belohnung so komplex ist, dass sie immer noch unzureichend verstanden wird.
Schlüsselworte: Belohnung; Theorien lernen; Bildung; Wissenschaftliche Kommunikation.	Das zweite Problem verbindet sich mit dem ersten Problem und scheint ernster zu sein. Es bezieht sich auf die unzulängliche Kommunikation, die den Bildungsfachleuten und, warum auch nicht, der Öffentlichkeit fehlt, über die wichtigen Entdeckungen, die die Forscher hinsichtlich der Bedeutung der Belohnung für den reibungslosen Ablauf des Lernprozesses gemacht haben. Deshalb möchten wir in diesem Artikel nicht nur den Stand und die Interpretation der Belohnungsforschung darstellen, sondern auch sie in einer Form präsentieren, die für die Bildungsprozess-Beteiligten zugänglicher ist, in der Hoffnung, dass Ihnen die enthaltenen und vorhandenen Informationen nützlich und leichter sein werden und dass sie leicht anwendbar werden.

1. Reward in the light of past and present educational research

More than a century has passed since the first major theory of learning was developed, a theory which has dominated the field of education for almost fifty years and it has been a source of inspiration for the subsequent theories. There is an explanation why Thorndike's theory, for this is the topic under discussion, was so influential and always actual. The discovery of the decisive role of reward in learning was exactly what brought celebrity to this theory. For centuries, those responsible for the education of children were guided by the "Repetitio est mater studiorum" principle, but it proved to be a false one and, by this, unsuccessful. More precisely, Thorndike has experimentally demonstrated that repetition does not create new learning, but only reinforces what has already been learnt, the true "mater studiorum" has confirmed to

be the reward, the one and only effect of our creative learning behaviour, of connections, as Thorndike used to name the results of the learning process (Thorndike, 1898).

The repetitive drill principle was not the only one to be targeted and eliminated. Another major victim of Thorndike's research was the sanction or, as one commonly refers to, the punishment. Also considered an infallible pedagogical principle, the "Spare the rod and spoil the child" principle was mostly applied throughout in time, and it has now proved to be false. Only that, unlike the former, which, if reformulated, can become useful after the process of learning has taken place, the latter is completely prejudiced. Punishment, as Thorndike has concluded, doesn't create anything. That is, it doesn't leave room for learning and, which is equally important, it neither destroys nor eliminates the skills that have

already been learnt, either good or bad. The only thing that sanction can determine is to lead to a reformulation of behaviours so that in the future, punishment will no longer be applied (Thorndike, 1910). A representative example of the misuse of punishment as a pedagogical principle and implicitly of its failure is the "correction schools" coercive institution where it was proven that the convicted minors did not give up their antisocial behaviours under the threat of punishment, but, on the contrary, they even perfected them in the hope of avoiding future punishments. In other words, these schools proved to be, in fact, genuine criminal and crime academies.

To conclude, the lesson taught by Thorndike is plain and clear. If you force the children to repeat meaninglessly and/ or punish them, the learning efficiency will decrease to zero. But no matter how simple this conclusion is and no matter how well it is scientifically based, one notices that even nowadays some of those involved in the educational phenomenon have not given up on those principles that have been demonstrated to be false.

The acknowledgment of the importance of reward in learning reached its peak in the mid-twentieth century, at the same time with Skinner's theory being formulated, a theory so influential that its creator was designated as the most important psychologist of all times by the Americans. Although apparently this theory seems to contradict Thorndike's classical connectionism, proposing a reversed connectionism, what actually occurs in Skinner's theory only enhances the role of learning. In reality, Skinner's experiments show that reward is not an effect or a luxury product of behaviour, but it is actually the stimulus itself. And what fascinated the Americans' pragmatic nature was Skinner's promise that any behaviour of an individual can be shaped in the direction desired by society if the reward-stimulus is applied on time (that is, immediately) and in its optimal form, (Skinner, 1966). What is also interesting here is the fact that for this psychologist too, repetition hasn't got any creative value in the process of learning, and the negative role of punishment is even better emphasized, its main effect being considered to be the behaviour of avoidance of the source that produces sanction.

Turned into a goddess, it would have been impossible for the reward to be able to receive greater honours than those given to Thorndike's classical theory and to Skinner's famous theory. That is why, obviously, there were disputes regarding the overvalued role of reward, at

first reserved, even within the behaviourist trend dominated by patriarch Skinner. Thus, the Brelands (1961), initially Skinner's disciples, discovered that the power of reward to generate learning is not absolute. Working in Hollywood in the field of animal training with the specific purpose of making them learn complex behaviours, the two researchers found out that the limits of the species to which the animal belongs to will not allow the learning of some behaviours that go beyond those limits. The animal does not learn everything, but only what it is able to, which is granted by limits of heredity.

Guthrie, a radical behaviourist himself (1934, 1959), went even beyond and dethroned the reward by taking away its status as creator of learning. According to his theory everybody memorises all the moves produced, and this memorization takes place spontaneously and immediately. But Skinner's disciples' protests were not too vehement, because Guthrie's experiments highlighted the spontaneity and naturalness we learn with, and the reward was nevertheless given the major role of decision on which multiple competing skills will be kept and which ones will be abandoned. Reward was further on granted the dominant position in learning, even though, this time, it carried out only in a managerial and not in a creative role.

Skinner's followers did not react in same manner when Garcia's research (1955) led to the conclusion, unacceptable for them, that learning can occur over a quite long period of time since the reward's or punishment's action. The idea that reward must appear as soon as possible after behaviour has occurred so as learning to take place successfully was inspired by Pavlov's research and was confirmed by Skinner's experiments, so that it became a basic postulate in the latter's theory, too. That's why countless accusations of imposture and dishonesty began to be made against Garcia, even reaching to racist attacks stemming from the fact that Garcia, the psychologist, was of Mexican origin. Those passionate attacks on Garcia's conclusions appeased in time as more and more psychologists replicated his experiments and reported the same results and conclusions. The revolutionary conclusion that everybody can learn the behaviours that are rewarded much later will be taken over and developed into the cognitive theories, as it will be seen later on.

If behaviourist theories evolved with reward as a central pillar, the new cognitivist trend shaped after World

War II shifted its attention from reward to the meaningful role of shaping up and mediator of processes that facilitate learning. As long as classical behaviourism did not accept the existence of any intermediary process between stimulation and behaviour, learning was conceived as an extremely simple process where it is sufficient for the reward to meet action or behaviour, for learning to occur. Cognitivists were the ones who complicated the process of learning by highlighting the role of mediating processes that intervene between reward and behaviour.

The first successful attempt to introduce new elements into the over-simplified process of learning, as it was seen up to then, belonged to Tolman (1948). Although strongly influenced by the gestalt movement that rejected behaviourist ideas, Tolman was keen on maintaining and interpreting the results emerging from his own research performed under the umbrella of behaviourism. That is why he called his theory "intentional behaviourism", "molar behaviourism" or "sign-gestalt behaviourism". His highly ingenious and praiseworthy experiments have also shown that the path from motivation to reward is guided by many other factors.

According to his theory, hopes (or expectations as they are called today) are such factors. Searching for rewards is never done blindly, but only according to a list of priorities or preferences. In reality, a chimpanzee which expects to get a banana, but which receives a salad leaf instead, although it is hungry and usually eats salad, will look for the banana, refusing to eat its favourite least expected food.

Another factor that comes between as a mediator in learning is the pursuit of a purpose, the existence of an intention. In its basic form, this intermediary factor is highlighted by the fact that the animal learns much more easily where it finds its food and, by comparison, with a greater difficulty, the movements that have to be made in order to reach it. The existence of any purpose or intention has been vehemently denied by the classical behaviourism. It is Tolman's merit of scientifically proving their existence with the help of such experiments.

Furthermore, Tolman's highly ingenious experiments also highlighted the fact that the animal never displays singular, disordered or unintegrated behaviours, but it has got a coherent representation of the environment in which it moves, creating a clear pattern of the movements that it will make. Nowadays, the concept of an inner schema is one of the most important in the cognitive psychology.

Despite his different interpretation given to it, the fact that Tolman also emphasized the existence and importance of spontaneous, non-compensated learning, as Guthrie did, is interesting.

Another interesting experiment brought into discussion the limits of reward from a different perspective. A group of chimpanzees which used to solve puzzles just for fun, spontaneously and with great pleasure, began to receive grapes as a reward whenever they successfully completed a puzzle. The spontaneity with which the chimpanzees were playing disappeared very quickly and they stopped playing unless they received their reward. The result of this experiment shows clearly enough that overcompensation is by no means a positive action. It could be said that overcompensation still produces learning but, at the same time, a clear alteration in the quality of learning can be also noticed. The lesson to be taught here is that over-rewarding, as any other exaggeration, loses its initial qualities (Laland, 2018).

More than that, the effect investigated and theorized by Premack (1962) reconsiders the role of sanction in learning, too. This effect refers to the fact that people are willing to accept a small and reasonable sanction in exchange for a more consistent future reward. This is exactly what grandparents or mothers everywhere apply when they promise their children dessert if they make an effort to eat what they consider good, but they refuse. Sanction, in a homeopathic quantity, proves here to play an important role in certain special learning situations, (Terhune & Premack, 1974).

One of the best-known theories of learning belonging to the second half of the twentieth century, Bandura's (1971) socio-cognitive theory, must be brought to attention, too; it is about the famous "bobo-doll" experiment in which it is shown that the tendency of children is to copy the adults' deeds, because they assume that these deeds will bring them some benefits. An easy way to learn, as Bandura's research shows, comes from people's willingness to examine and interact with others. People are social beings and that is why they cannot escape from the influence that others exert on them, the process of learning often occurring on social grounds.

At the same time with the cognitive psychologists, humanistic psychologists have also tried to remove learning from the punishment-reward duality. People have emotions and feelings, and those involved in the

complex process of learning cannot escape from these experiences. The human being cannot be defined only as a behavioural being as termed by behaviourism, nor just as an intelligent being as cognitivism lets us think. Perhaps the theory of attachment best highlighted this aspect, starting with Bowlby and influenced by psychoanalysis at its beginning, a theory which nowadays is confirmed both by ethology and the evolutionist psychology.

There is not a more eloquent example for the involvement of emotions in the process of learning than the joy of kindergarten children when they receive incentives such as the red round sticker dots when displaying desirable behaviours, expected by educators. At a first glance, the children's behaviour is far from any logical thought. A red round sticker dot has no material value, cannot be eaten, and not even kept for a longer time as it is the case of later diplomas and cups. Apparently, children's exaggerated joy is a free, silly one. In fact, those red round sticker dots have a profound significance and support the thesis of the attachment theory. They "inform" the children, when offered, that the educator deeply appreciates them and that this appreciation can guarantee that they will be protected in the future as well. Hugs, caresses, praises or kind words are all rewarding emotional stimuli that enhance learning. Thus, the children's need to feel emotionally secure can determine them to learn behaviours that bring balance and safety, in a very easy manner.

Many forms and types of influence that reward can take or have when it is involved in shaping people's behaviour, that is in learning, have been reviewed so far. And, for sure, it is still a long way until the comprehension of all the subtle or less subtle ways in which learning determines people's evolution. And, if Aristotle advised everyone to establish the value of a certain thing by imagining what would happen if it did not exist, one can easily infer that removing the reward from the process of learning and replacing it with sanction would create monsters of stagnation or slowing of human's evolution, abandonment, avoidance, disappointment, frustration, etc. There are enough reasons to make any effort possible to better and profoundly understand the subtle game of reward in the process of learning.

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Comparative analysis of school skills acquisition in primary school pupils temporarily abandoned by one or both migrant parents and in non-abandoned pupils. Neamț county study case

Irina Turcu (Sullivan) & Mușata Bocoș

Comparative analysis of school skills acquisition in primary school pupils temporarily abandoned by one or both migrant parents and in non-abandoned pupils. Neamț county study case

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Abstract	
Keywords: abandoned children of migrant parents; school skills; Neamț county; primary school skills.	For children aged 6-11, participation in primary school classes is mandatory and essential for their development. At this age, children must acquire essential school skills such as reading, writing and mathematics. Studies conducted between 2005-2010 regarding the impact of temporary abandonment of children by their migrant parents indicated many negative effects, including poor school performance linked to their lack of stimulation, guidance and supervision, doubled by complex chores burdening them home (e.g. care of the younger siblings and live stock, housework, field work) especially in rural areas. In 2013 and 2015, Romanian authorities implemented supplementary measures to protect children of migrant parents who are left at home. The present case study in Neamț county rural area aims to check if the new measures have the anticipated benefits and if temporarily abandoned children of migrant parents have a better life now than 10-15 years ago. The study case involved 50 children aged 6-11, 27 of them non-abandoned, 23 temporarily abandoned by either one or both migrant parents. In the past 30 years, Neamț county of Romania has been stricken by unemployment and poverty and had a slow economic development even during the 2006-2008 economic boom, with an average monthly income of only 400-450 euro per month. To evaluate children' school skills, interviews were conducted with parents, pupils, teachers, educational counsellors. Various questionnaires were applied, including the SRP-C and SRP-I questionnaires of BASC-2 Test to assess pupils attitude towards their school and teachers.

Zusammenfasung	
Schlüsselworte: verlassene Kinder von Migranteneltern; schulische Fähigkeiten; Kreis Neamț; Grundschule Fähigkeiten.	Für Kinder im Alter von 6 bis 11 Jahren ist die Teilnahme an Grundschulklassen obligatorisch und für ihre Entwicklung unerlässlich. In diesem Alter müssen Kinder grundlegende schulische Fähigkeiten wie Lesen, Schreiben und Mathematik erwerben. Zwischen 2005 und 2010 durchgeführte Studien über die Auswirkungen des vorübergehenden Ausscheidens von Kindern durch ihre Eltern mit Migrationshintergrund wiesen auf zahlreiche negative Auswirkungen hin, darunter schlechte schulische Leistungen aufgrund mangelnder Stimulation, Anleitung und Aufsicht, durch komplexe Aufgaben verdoppelt, die sie zu Hause belasten (z. B. Betreuung der jüngere Geschwister und Vieh, Hausarbeit, Feldarbeit), insbesondere in ländlichen Gebieten. In den Jahren 2013 und 2015 haben die rumänischen Behörden ergänzende Maßnahmen zum Schutz von Kindern von Eltern mit Migrationshintergrund ergriffen, die ihr Zuhause verlassen haben. Der vorliegende Studienfall im ländlichen Gebiet des Kreises Neamț zielt darauf ab zu prüfen, ob die neuen Maßnahmen den erwarteten Nutzen haben und ob es den vorübergehend verlassenen Kindern von Eltern mit Migrationshintergrund besser geht als vor 10 bis 15 Jahren. Der Studienfall umfasste 50 Kinder im Alter von 6 bis 11 Jahren, von denen 27 nicht aufgegeben und 23 vorübergehend von einem oder beiden Migranteneltern aufgegeben wurden. In den letzten 30 Jahren war der rumänische Landkreis Neamț von Arbeitslosigkeit und Armut betroffen und verzeichnete auch während des Wirtschaftsbooms 2006-2008 eine langsame wirtschaftliche Entwicklung mit einem durchschnittlichen monatlichen Einkommen von nur 400-450 Euro. Um die schulischen Fähigkeiten der Kinder zu bewerten, wurden Interviews mit Eltern, Schülern, Lehrern und Erziehungsberatern durchgeführt. Es wurden verschiedene Fragebögen verwendet, einschließlich der Fragebögen SRP-C und SRP-I des BASC-2-Tests, um die Einstellung der Schüler gegenüber ihrer Schule und ihren Lehrern zu auswerten.

1. Introduction

Studies conducted between 2005-2010 regarding the impact of temporary parental abandonment of child indicated a number of negative effects, among them being poor school performance of the abandoned children due to the lack of stimulation, guidance and supervision, doubled by complex tasks that burdened them (the care of the younger siblings, housework), especially in rural areas.

Recognizing the need for additional protection for children temporarily abandoned by either one or both

parents, Romanian authorities have taken several legal measures to protect children of migrant parents:

- **ANPDCA Order no. 219/15.06.2006** regarding the identification, intervention and monitoring of the children deprived of the care of their migrant parents;

- **Law 272/2004** of child protection.

Order 219 stipulates that Romanian citizens with minor children in care and who wish to work abroad leaving their children home shall notify the Public Social Assistance Service (SPAS) / the city hall of residence of their intention to migrate and shall indicate the person who is appointed as their children's caretaker for the duration of their absence.

In 2013, the Romanian Parliament amended Law no. 272/2004 on child protection introducing a distinct section for children of migrant parents left at home stipulating, among other things, the obligation of parents to notify the social assistance services (SPAS) with a minimum 40 days before leaving the country of their intentions.

Parents applying for jobs abroad have the obligation to present at the employment agencies the paper issued by SPAS/local town hall testifying the fulfilment of their obligation under the new law. SPAS or the General Directorate of Social Assistance and Child Protection (DGASPC) must track all cases of children left home by their migrant parents and take the necessary measures to prevent the separation of children from their families, to asses how abandoned children maintain relationship with their absent parents, if they need psychological counselling and identify the specific support services the community can offer to the family/ person taking care of the abandoned children.

Social service workers have the obligation to reassess the situation of abandoned children every 3 months. If there are compelling reasons to believe that their physical, mental, intellectual or moral development may be in jeopardy, the social workers must notify the General Directorate of Social Assistance and Child Protection (DGASPC) to establish special protection measures such as emergency institutionalization.

In August 2015, at the proposal of Save the Children Romania, the Government approved a procedure monitoring rearing and caring of children abandoned by at least one parent working abroad. All schools must send to the Public Social Assistance Service (SPAS), in the last quarter of each calendar year, an information note on children who are living with one parent, the other one working abroad, children whose both parents left to work abroad, children of single parents who left to work abroad and children whose parents returned home after working abroad for at least 12 months. Schools are required to send a list of all the children in these categories to SPAS within 15 days of the request. The lists include all personal data and home addresses of these children and their families.

After receiving the information note, SPAS has the obligation to visit each of the listed children at home and check if the migrant parents duly notified their departure and designated their children's caretakers. In order to be eligible to take care of the children of migrant parents, a person must be of the consenting age, belong to the extended family and fulfil all the material and moral conditions necessary for the upbringing and care of the children. In addition, the legal caretakers have the obligation to provide SPAS with the absent parents' contacts and prove that they keep in touch with them.

2. Theoretical foundation

For children between the ages of 6-11 years, participation in primary school classes is mandatory and essential in their development. At this level, children must acquire certain essential skills for the rest of their lives: reading, writing and mathematics. It is not possible to talk about a normal development of the child at these ages without taking into account the extent to which the above mentioned skills are acquired. "School learning is the typical form of learning in pupils. It takes place in an institutionalized framework, under the guidance of the teacher, being guided by curricula, programs and textbooks with the aim being for the student to assimilate knowledge, skills, theories and laws as well as the formation of applied and creative mental operations necessary for their intellectual and adaptative progress." (Răduț-Taciu, Bocoş, Chiş, (coord.), 2015, p. 123). "Learning defines the acquisition of skills." (Chiş, 2005, p. 70).

Children aged 6 (at the beginning of the preparatory class) should have a vocabulary of approximately 2500 words and know the rules of correct oral language. This is a very important aspect since children have to engage in conversations with teachers and peers and be able to

express their thoughts and ideas, their intentions, needs and feelings in a socially acceptable manner.

Another important aspect during this period is the development of their listening skill: primary school pupils gradually learn to listen to explanations and arguments of teachers and colleagues and follow directions and reasoning.

Learning to write and read at this age is crucial for their development of language, with reading providing an essential contribution to the development of vocabulary. Various school activities support the development of language as pupils learn specific terminology during their years in primary school. Reading and writing further determine the development of oral language and the intellectual development of children, contributing to their ability to reason, argue and demonstrate.

In primary school, pronunciation and writing difficulties and errors may occur, sometimes mild (transient), others more complicated and persistent indicating learning difficulties and speech problems such as dyslalia, stuttering, dysgraphia, dyslexia. Teachers and the parents often need the support of psychologists and speech therapists to properly identify such disorders and intervene.

3. Research methodology

In 2018 provided the largest number of work migrants within the European Union. To investigate if the new legal measures to protect abandoned children have the anticipated benefits and if there are major changes in terms of the living conditions, health, psycho-social development and school competences of temporarily abandoned children by either one or both parents a case study was conducted between 2016-2017 in Neamț county.

The study involved 50 children aged 6-11, 27 of them living with both parents, 23 temporarily abandoned by either one or both parents: 12 children abandoned by their fathers and under their mothers' care, 4 children temporarily abandoned by their mothers and under their fathers' care and 7 children temporarily abandoned by both parents and under the care of their maternal grandparents (6) and mother's sister (1).

All 50 children learn in three primary schools in two large communes of Neamț county: Girov (7400

inhabitants) and Bodești (5147 inhabitants). Together they have 11 villages in their administration (Boțești, Căciulești, Dănești, Doina, Gura Văii, Popești, Turturești, Verșești, Căciulești, Bodeștii de Jos, Corni, Oșlobeni).

In the last 30 years, Neamț has been one of the most affected counties in Romania by economic migration of workers. It is one of the poorest counties in Romania with a slow economic development even during the "economic boom" of 2006-2008. In 2016, at the beginning of the present research, the average monthly income was 1546 lei (€343) compared to 1480 lei (€329) in Harghita, the poorest county in the country that year. In 2018, according to the National Institute for Statistics, Neamț county registered the fourth lowest monthly average net income in Romania, not much higher than the lowest one.

To evaluate the school skills of the 50 participants, interviews were conducted with parents, pupils, teachers and educational counsellors. Various questionnaires applied, including the SRP-C and SRP-I questionnaires of BASC-2 Test to assess pupils attitude towards their school and teachers. We were particularly interested in the following areas:

- acquisition of school skills specific to the primary school, mainly reading, writing and mathematics;

- participation of pupils in class activities;

- children's attention and involvement in the class tasks and homework.

Children aged 6 (at the beginning of the preparatory class) should have a vocabulary of approximately 2500 words and know the rules of correct oral language. This is a very important aspect since children have to engage in conversations with teachers and peers and be able to express their thoughts and ideas, their intentions, needs and feelings in a socially acceptable manner.

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In primary school, pronunciation and writing difficulties and errors may occur, sometimes mild (transient), others more complicated and persistent indicating learning difficulties and speech problems such as dyslalia, stuttering, dysgraphia or dyslexia. Teachers and the parents often need the support of psychologists and speech therapists to properly identify such disorders and intervene.

4. Results

All of the 50 primary school pupils participating in our Neamţ county study case speak correctly and have a fairly good pronunciation, appropriate for their age. None suffer from speech disorders at present. Two of the 23 temporarily abandoned children had speech delay before attending school and both benefited from therapy.

Of the 50 children who participated in the Neamţ county study case, 48 have acquired the necessary school skills (reading, writing, mathematical computation) and are properly performing their school assignments. Two children were diagnosed with dyscalculia: one is a girl of 6 who lives at present with her mother and stepfather but experienced domestic violence in her early life before her mother divorced her biological father, and the other one is a first grader,7 years old and temporarily abandoned by both parents. She lives with her grandparents since she was born.
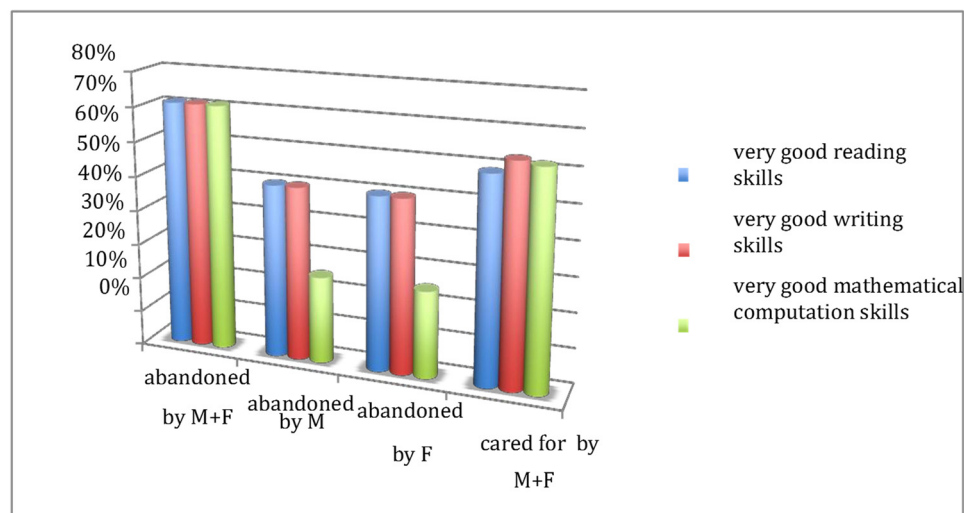

Figure no. 1. The degree of mastery of the main school skills

Reading. Most children participating in the present study have good reading skills:

- 63% of non-abandoned children and 56.5% of the temporarily abandoned children have very good reading skills;
- 33.3% of non-abandoned children and 30.4% of the temporarily abandoned children have good reading skills;
- 3.7% non-abandoned children and 13% temporarily abandoned children read sufficiently well according to their age but the differences are not statistically significant.

There are some differences within the group of temporarily abandoned children, but they are statistically

insignificant: children abandoned by both parents and raised by grandparents have better reading skills than all the other children, while children temporarily abandoned by their mothers and raised by their fathers have the most modest reading skills compared to all the other children. These differences are explained by the fact that grandparents tend to keep their grandchildren more inside their homes (where they can supervise them better) and children spend some of their spare time reading (71% children raised by their grandparents read in their leisure time). Unfortunately, it comes with a cost: 43% of these children are overweight or obese. Fathers tend to involve their children more in physical activities, with children raised by their fathers and temporarily abandoned by their mothers being the most active sub-group of all the 50

participants: all 4 children have normal weight and all 4 play outdoors and have some sort of sport activities.

None of the study case participants has insufficient reading skills.

Table no. 1. Acquisition of school skill: reading. Current situation

Reading

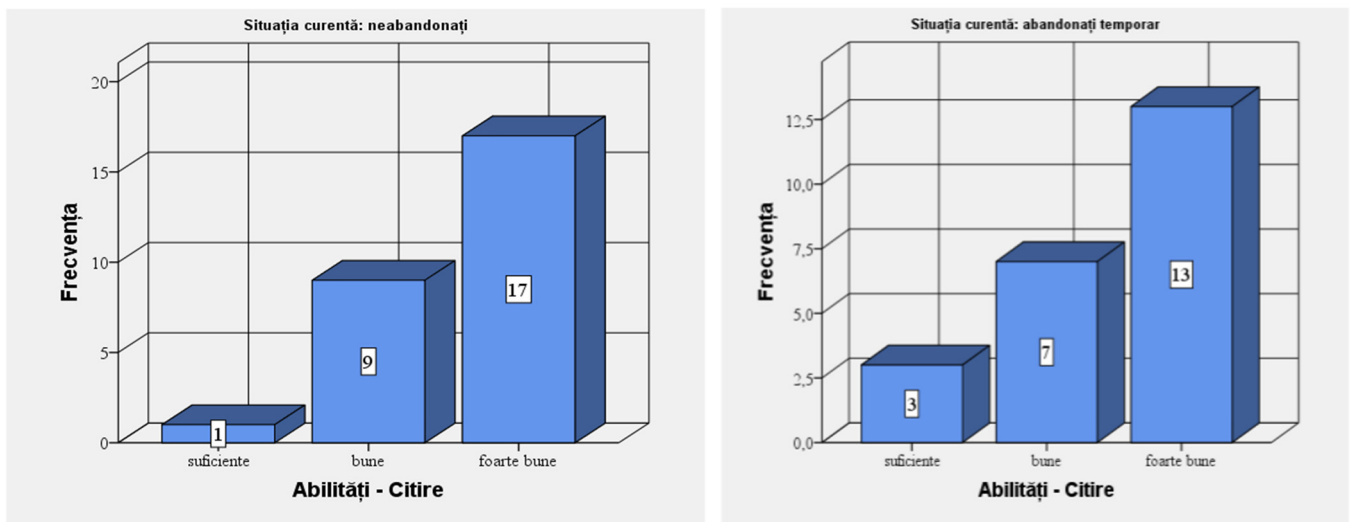| Current situation			Frequency	Percentage of total sample	Percentage of validated data	Cumulative percentage
Not abandoned	Validated data	enough	1	3,7	3,7	3,7
		good	9	33,3	33,3	37,0
		very good	17	63,0	63,0	100,0
		Total	27	100,0	100,0	
Abandoned temporarily	Validated data	enough	3	13,0	13,0	13,0
		good	7	30,4	30,4	43,5
		very good	13	56,5	56,5	100,0
		Total	23	100,0	100,0	

Figure no. 2. Acquiring the school skill – reading

Writing. Writing skills are very similar to reading skills. The two groups of children (abandoned and non-abandoned) do not differ significantly statistically with regard to their writing skills. ($\chi2 = 1,563$; $df = 2$ $p = 0.458$).

Table no. 2. Acquisition the school skill – writing

Writing

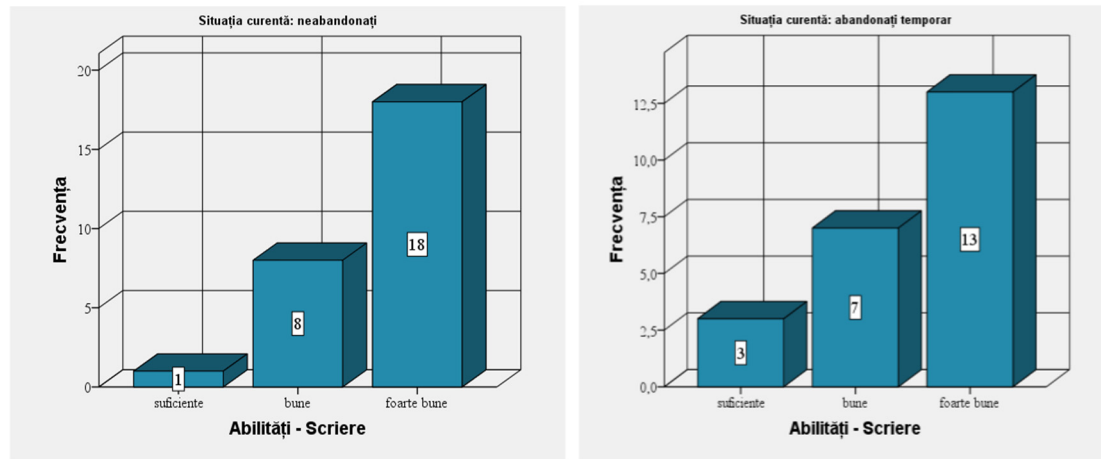| Current situation			Frequency	Percentage of total sample	Percentage of validated data	Cumulative percentage
not abandoned	Data validated	enough	1	3,7	3,7	3,7
		good	8	29,6	29,6	33,3
		very good	18	66,7	66,7	100,0
		Total	27	100,0	100,0	
abandoned temporarily	Data validated	enough	3	13,0	13,0	13,0
		good	7	30,4	30,4	43,5
		very good	13	56,5	56,5	100,0
		Total	23	100,0	100,0	

Figure no. 3. Acquisition of the school skill – writing

Mathematics. Mathematical computation skills appear to be very good for a higher percentage of the non-abandoned children but the result of the Chi-Square Test shows that the two groups do not differ statistically significantly ($\chi2 = 2.333$; $df = 2$; $p = 0.311$).

Table no. 3. Acquisition of the school skill – mathematical computation. Current situation

Mathematics

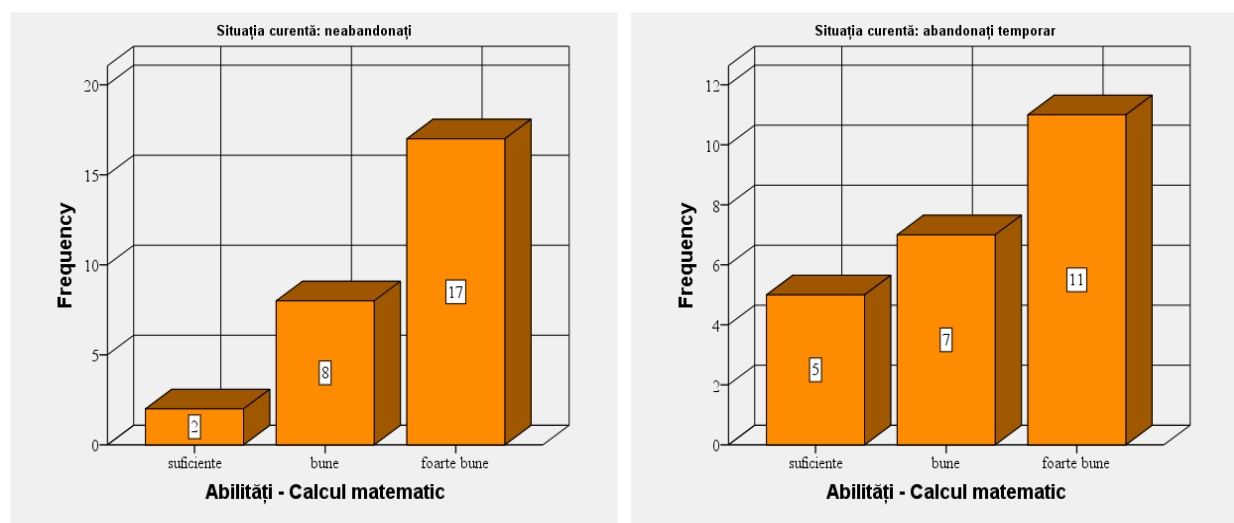| Current situation			Frequency	Percentage of total sample	Percentage of validated data	Cumulative percentage
not abandoned	validated data	enough	2	7,4	7,4	7,4
		good	8	29,6	29,6	37,0
		very good	17	63,0	63,0	100,0
		Total	27	100,0	100,0	
abandoned temporarily	validated data	enough	5	21,7	21,7	21,7
		good	7	30,4	30,4	52,2
		very good	11	47,8	47,8	100,0
		Total	23	100,0	100,0	

Figure no. 4. Acquiring the school skill – mathematical computation

Oral language. The two groups of children do not differ statistically significantly ($\chi2 = 0.655$; $df = 2$; $p = 0.721$) from this point of view.

Table no. 4. Oral language. Current situation

Oral language

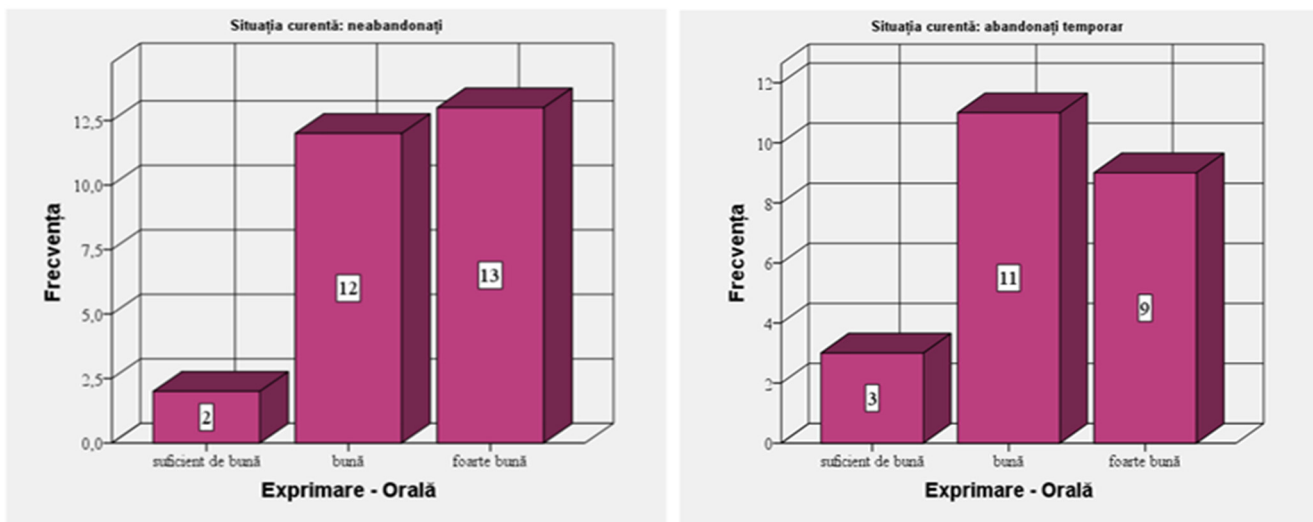| Current situation			Frequency	Percentage of total sample	Percentage of validated data	Cumulative percentage
not abandoned	validated data	good enough	2	7,4	7,4	7,4
		good	12	44,4	44,4	51,9
		very good	13	48,1	48,1	100,0
		Total	27	100,0	100,0	
abandoned temporarily	validated data	good enough	3	13,0	13,0	13,0
		good	11	47,8	47,8	60,9
		very good	9	39,1	39,1	100,0
		Total	23	100,0	100,0	

Figure no. 5. Oral language

Learning difficulties. There is one child in each group of children - non-abandoned and temporarily abandoned - having learning difficulties. Both have dyscalculia.
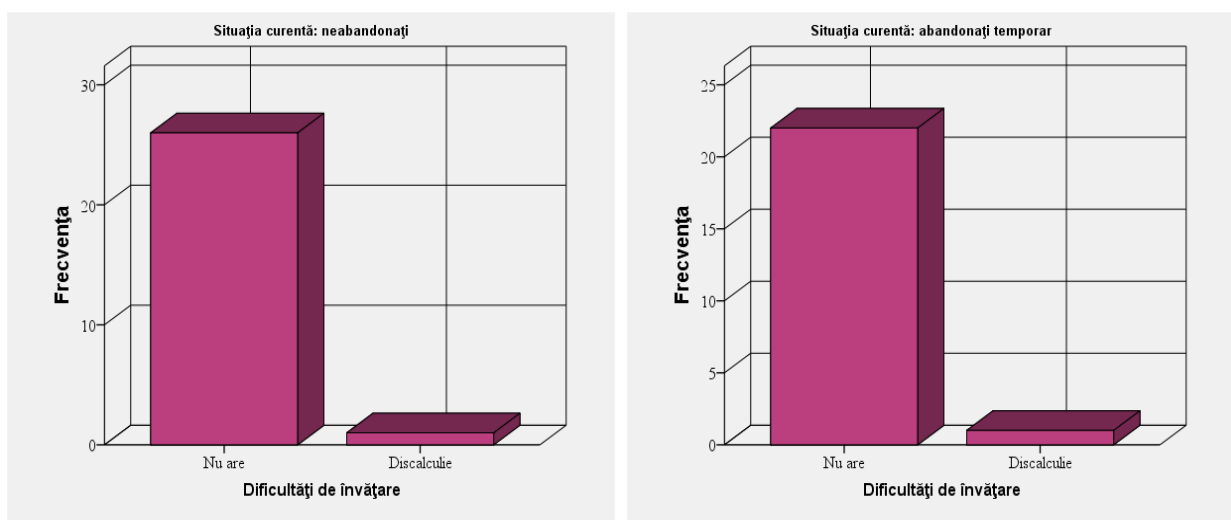

Figure no. 6. Learning difficulties

Attention in class. 51.9% of non-abandoned have very good levels of attention in class and 39.1% of the temporarily abandoned children but there is no statistically significant difference between the two groups of children. (χ2=1,107; df=3; p=0.775).

Table no. 5. Attention in class

Attention in class

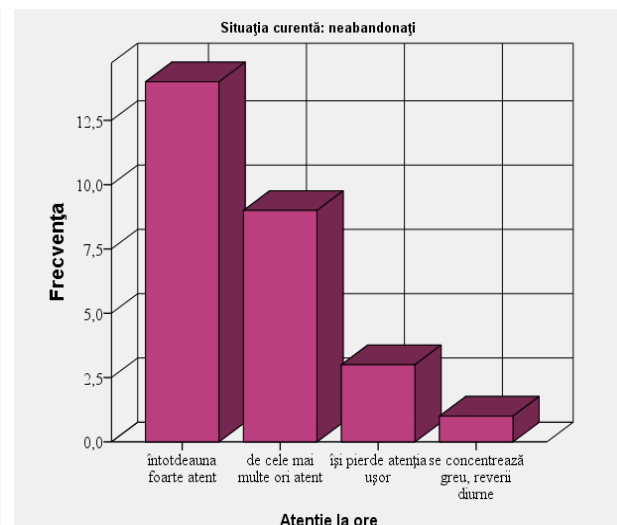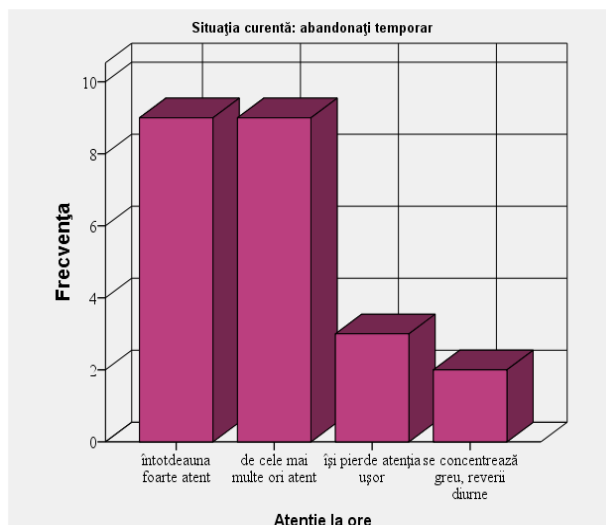| Current situation			Frequency	Percentage of total sample	Percentage of validated data	Cumulative percentage
Non-abandoned	Validated	always pay attention	14	51,9	51,9	51,9
		most of the times pay attention	9	33,3	33,3	85,2
		they lose attention easily	3	11,1	11,1	96,3
		they focus hard, daytime dreaming	1	3,7	3,7	100,0
		Total	27	100,0	100,0	
Abandoned	Validated	always pay attention	9	39,1	39,1	39,1
		most of the times pay attention	9	39,1	39,1	78,3
		they lose focus easily	3	13,0	13,0	91,3
		they focus hard, daytime dreaming	2	8,7	8,7	100,0
		Total	23	100,0	100,0	

Figure no. 7. Attention in class

85% of the 27 non-abandoned children and 83% of the 23 temporarily abandoned children have good and very good school skills, are diligent, involved and active in classes, always completing their tasks and homework. Only one non-abandoned child in the preparatory class loses his focus during class activities (4% of the non-abandoned children).

Children abandoned by both migrant parents and reared by their grandparents seem to have some of the best results in school. Older studies showed quite a different situation back in 2006-2010 when children abandoned by both migrant parents were the most vulnerable and had the lowest school performance. Back then, many of these children were left in the care of older siblings (most of them preteenagers or teenagers), neighbours and other people unrelated to them. We can conclude that it is not the presence or absence of parent(s) the most influent factor for good school results in primary school children but the quality of their care, the love and support they receive from their caregivers as well as the caregivers' attitude towards school and learning in general.

With regard to pupils' **attention in classes and completion of tasks**, only 2 children of 50 have shown major concentration problems in classes due to emotional problems (depression, anxiety, post traumatic stress). Five of the 23 temporarily abandoned children have sometimes attention problems (one temporarily abandoned by his mother and aged 6, the other 4 temporarily abandoned by the fathers), 22% in their group. Only 2 of 27 non-abandoned children have focus problems in classes (7% in their group).

The work assignments in the classroom - way of accomplishment. Most of the children participating in this case study carry out their work assignments in the classroom. Of the 23 children in temporarily abandoned by parents, 2 need help (9%) and another 2 (9%) hurry to solve them and make mistakes. Of the 27 children raised by both parents, only 3 need to be helped to complete the work assignments in the classroom (11%).

There are no statistically significant differences between the two groups of children neither in terms of the assignments performed in the classroom ($\chi2 = 6,242$; df = 3; p = 0.100).
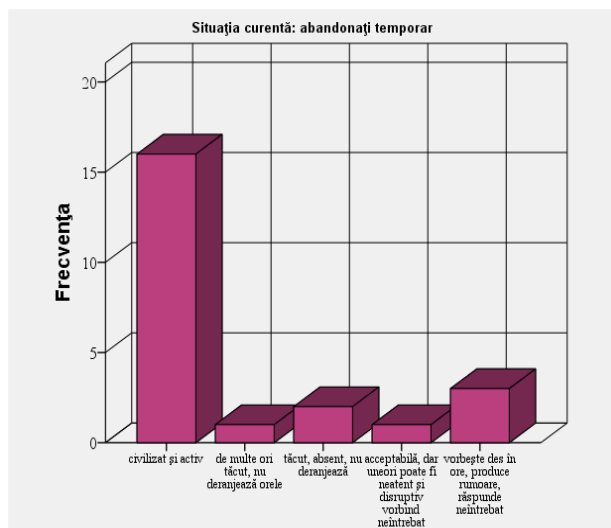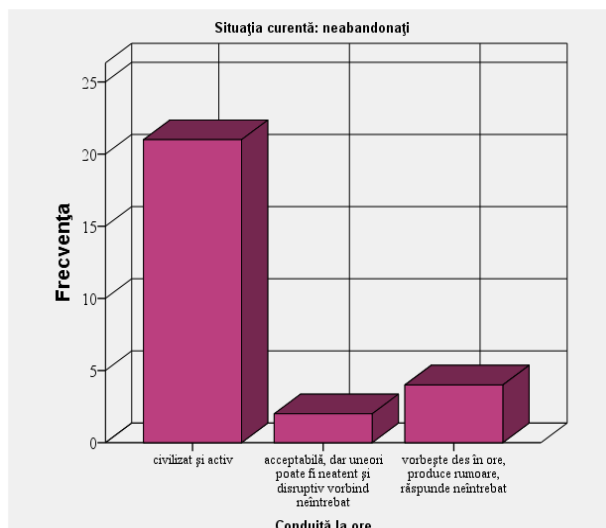
Class attendance. As shown in the table below, most of the 50 children participating in Neamț county study case regularly attend their classes, with the rare absences being mostly due to their health preventing them attending classes least they infect their colleagues with anything contagious.

Table no. 8. Attendance at classes. Current situation

Attendance at classes

Current situation			Frequency	Percentage of total	Percentage of validated data	Cumulative percentage
Non-abandoned	Validated data	Participate daily	24	88,9	88,9	88,9
		Absent from time to time , only when ill	3	11,1	11,1	100,0
		Total	27	100,0	100,0	
Abandoned	Data validated	Participate daily	17	73,9	77,3	77,3
		Absent from time to time , only when ill	5	21,7	22,7	100,0
		Total	22	95,7	100,0	
	No data		1	4,3		
	Total		23	100,0		

Deviant behaviour. Deviant behaviours are rare in the 50 participants in the Neamț county case study as shown in the table below.

Table no. 9. Deviant behaviours. Current situation

Deviant behaviour

| Current situation			Frecquency	Percentage of total	Percentage of validated data	Cumulative percentage
Non-abandoned	Validated data	No deviant behaviour	23	85,2	85,2	85,2
		Self-agressive, sometimes aggressive towards peers and teachers	1	3,7	3,7	88,9
		Reckless behaviour, bravery	1	3,7	3,7	92,6
		Physical violence	1	3,7	3,7	96,3
		Physical and verbal violence	1	3,7	3,7	100,0
		Total	27	100,0	100,0	
Abandoned	Validated data	No deviant behaviour	22	95,7	95,7	95,7
		Physical and verbal violence	1	4,3	4,3	100,0
		Total	23	100,0	100,0	
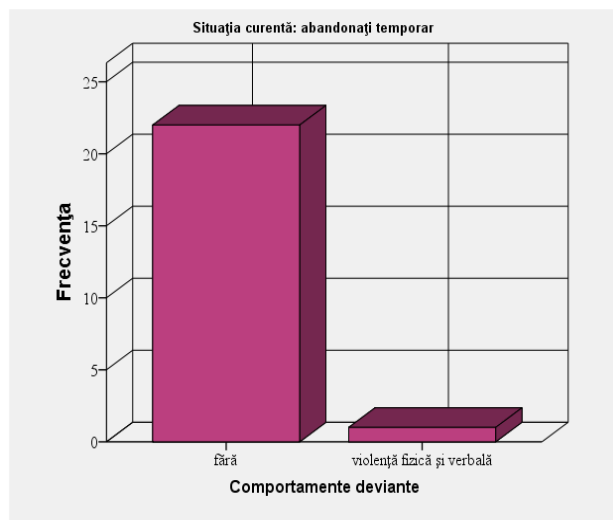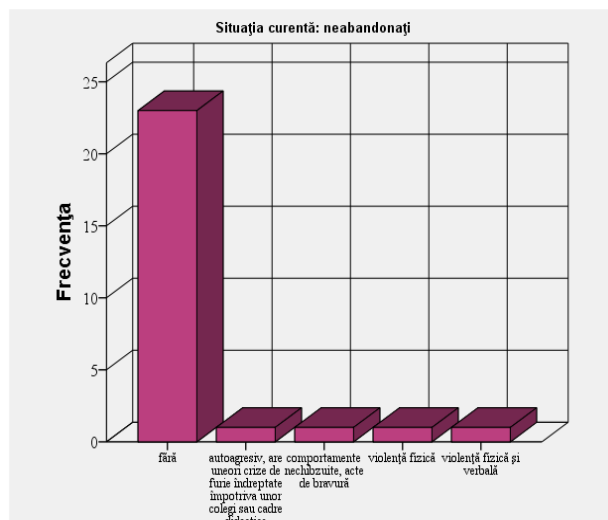
Figure no. 11. Deviant behaviour

Disciplinary actions. No disciplinary action was taken against any of the 50 children in the Neamț county study case. Children with emotional and behaviour problems and their parents benefited from counselling and/or psychotherapy.

5. Discussions

85% of the 27 non-abandoned children and 83% of the 23 temporarily abandoned children have good and very good school skills, are diligent, involved and active in classes, always completing their tasks and homework. Only one non-abandoned child in the preparatory class loses his focus during class activities (4% of the non-abandoned children).

Children abandoned by both migrant parents and reared by their grandparents seem to have some of the best results in school. Older studies showed quite a different situation back in 2006-2010 when children abandoned by both migrant parents was the most vulnerable and had the lowest school performance. Back then, many of these children were left in the care of older siblings (most of them preteenagers or teenagers), neighbours and other people unrelated to them. We can conclude that it is not the presence or absence of parent(s) the most influent factor for good school results in primary school children

but the quality of their care, the love and support they receive from their caregivers as well as the caregivers' attitude towards school and learning in general.

6. Conclusions

1. Non-abandoned children are more attentive in classes and complete their tasks and homework more often than temporarily abandoned children.

2. Children of fathers who have temporarily left Romania for work tend to have more attention problems in classes and in doing their tasks and homework. Mothers of children with fathers who have temporarily left Romania for work tend to be more tolerant with regard to homework completion and sometimes allow their children to go to school unprepared. Mothers are also more willing to do their children's homework and spare them of most chores.

3. Grandparents who rear their grandchildren are very supportive and value school and learning and insist on children going to school properly prepared every day. Most grandparents wish for their grandchildren to continue their studies at high school and possibly at university.

4. Adults' attitude towards school and learning is a crucial factor in motivating children to study and fulfil their daily school tasks. If adults value school, children are more likely to value school too especially if teachers do not overload them with tasks and homework. Absent migrant parents keep almost daily in touch (and often even several times a day) with their children and talk about school and study on phones and video-calls. They also encourage their children to study and show their appreciation towards children's good results in school and even help them with their homework from time to time. Technology assisted parenting may not be as good as direct parenting but proves to be of great help. Migrant parents do not feel disconnected from their children and children know that their absent parents know a lot about them, their school, friends and activities.

5. The attitude of children's caregiver towards teachers greatly influence pupils attitude towards

their teachers. If adults are respectful, children are respectful too. In the rural area of Neamț county where the present study case was conducted, adults' attitude towards school and teachers is mostly respectful and positive: education is important, educated people have better jobs in Romania and in other countries. Teachers can help children study and be prosperous later in life. Teachers know how to do their job and adults do not interfere much with them. As a result of this, all of the 50 children who participated in the study case love going to school.

6. If children's caregivers exempt them of their homework or help them too much and too often with their homework, children get lazy both at home and in the classroom.

7. Well-trained and enthusiastic teachers make a difference. All of the 50 children participating in the case study, even the ones with the most modest results showed a positive attitude towards school as shown by the BASC-2 questionnaires SPR-C and SPR-I. The only pupil who was referred to therapy because of her school anxiety also loved school and the true reason she wanted to stay home and miss school was related to her being jealous of her baby brother.

8. Not burdening children of 6-10 with homework makes school very attractive. All children in the study case clearly stated that they do not feel their life is getting harder because of school, nor that they have no time to play because of homework and other school related chores. All 50 children stated that they were unhappy to miss school no matter why and there is no reason to doubt their honesty since they were interviewed separately one by one and guaranteed the confidentiality of their answers.

9. All 50 children regularly attend all classes and would only miss school if their health does not allow them. Children's enthusiasm for school reflects in their answers to the BASC-2 questionnaire and is confirmed by their teachers and parents.

The presence or the absence of parents is not a key factor in school performance and academic results of children aged 6-11 but rather the quality of their rearing and their caregivers' positive and encouraging attitude towards school and learning. Another key element of primary school children's good results in school is the teacher itself – it is important that children perceive their teachers as just, correct, understanding and firm. It is also important that children aged 6-11 are not overloaded with school tasks and homework. As long as learning is fun and interesting and they have enough time to play and relax, primary school children will love school.

Authors note:

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Adaptation of an educational ideal and refinement of the didactic strategies used in the management pedagogy in Romania

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Adaptation of an educational ideal and refinement of the didactic strategies used in the management pedagogy in Romania

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Abstract

Keywords:
management pedagogy;
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In this paper we discuss two potential problems in the management education in Romania: (1) the lack of alignment of the management pedagogues to the same direction in preparing the management students for the future and (2) the extra-use of active-participative didactic strategies used by the management professors in specific management disciplines. Given two real-life situations, as a starting point, we elaborate and analyze some drawbacks and consequences these phenomena may have for the students enrolled in management education programs. Based on modern didactic principles and qualitative data analysis we propose then solutions to solve these problems and develop testable hypotheses which can be the subject of future statistical analyses for the improvement of the management education in Romania.

Zusammenfasung

Schlüsselworte:
Management-
Pädagogik;
pädagogisches Ideal;
didaktische
Strategien

In diesem Artikel werden zwei potenzielle Probleme in der Managementausbildung in Rumänien erörtert: (1) die mangelnde Ausrichtung der Managementpädagogen auf die gleiche Richtung bei der Vorbereitung der Managementstudenten auf die Zukunft und (2) der zusätzliche Einsatz von aktiv-partizipativer Didaktik Strategien, die die Managementprofessoren in bestimmten Managementdisziplinen anwenden. Ausgehend von zwei realen Situationen werden einige Nachteile und Konsequenzen erarbeitet und analysiert, die diese Phänomene für die in Managementprogrammen eingeschriebenen Studenten haben können. Basierend auf modernen didaktischen Prinzipien und qualitativen Datenanalysen schlagen wir Lösungen zur Lösung dieser Probleme vor und entwickeln überprüfbare Hypothesen, die Gegenstand zukünftiger statistischer Analysen zur Verbesserung der Managementausbildung in Rumänien sein können.

1. Introduction

Modern education can be seen as a set of activities devoted to the formation of new generations of citizens, through the dissemination of knowledge, development of abilities and behaviors, assimilation of values and cultural norms inherited by the society (Ionescu *et al*., 1995). According to Bocoș and Jucan (2019) there are many dimensions of education: intellectual education, moral education, religious education, professional education, esthetical education etc. One important dimension, in the contemporary context, is professional education. Particularly, the management education offered to the students in management or business schools. For instance, in Scimago Journal Rank (2019) in the first 50 journals according to their ranks, ten are economics, management or business-related journals. Management education could be seen as an educational activity organized at college/university level aiming to educate students for planning, organizing, leading people and controlling activities in organizations (Daft, 2010; Johns, 1996; Popa *et.al*., 2013).

In the field of pedagogy (Bocoș, Jucan, 2019; Ionescu *et al*., 1995) and particularly in socio-human pedagogy (Albulescu, Albulescu, 1999) have been established general principles regarding the modern pedagogy, have been described in greater detail the possible expositive and active-participative didactic strategies, the effectiveness and efficiency of each one and the circumstances under which these strategies may be suitable for application. Despite these well-established theories of teaching and learning, there is limited literature regarding how these general principles are actually applied by teachers of management. In other words, there is limited empirical evidence regarding the practice of teaching in one specific discipline. In our case, of management docents in management schools in Romania.

On the other hand, as far as we know, there is no empirical evidence regarding the situations under which the use of the active-participative didactic strategies may be dysfunctional. Many academics underline again and again the importance of using active-participative didactic strategies at the expense of the expositive ones, even putting at the centre of modern didactic the use of active-participative strategies. In this context, the problem is that they do not take into account that in some circumstances the use of these interactive strategies may by dysfunctional. For example, in situations in which the teacher over-utilizes these didactic strategies and methods and only uses active-participative didactic strategies, neglecting the informative dimension of teaching as a whole.

This is the stream of research our paper contributes to. Based on two real-life situations, occurring at college/university level, we analyze the consequences these problematic situations may have for the learning achieved by the students on the one hand, and for the future performances of management graduates at their workplace on the other hand. Then, based on the real-life situation's analysis and on the existing literature in the fields of management and pedagogy we develop testable hypotheses regarding the improvement of management education in Romania.

Drawing upon the existing literature in the fields of pedagogy and management, the paper may be important for several reasons: (1) it helps the practice of management pedagogy at college/university level be improved; (2) it helps the operationalization of the educational ideal and educational scope be refined, through sketching clearer general educational objectives for management education, differentiating between high-schools graduates and college/university graduates; (3) it helps to align the formation of management students to the same educational ideal and educational scope; (4) it provides a framework for guidance for the integration in the workforce of management graduates; (4) it sketches a logical pathway for future management graduates development along their careers.

Additionally, the assumptions discussed in this paper can be transferable also to other disciplines. For example, engineering. The engineering schools may also want to explicitly adopt an educational ideal and/ or may want to favour a balance regarding the utilization of expositive and active-participative didactic strategies. Perhaps, they

will also notice, through a careful analysis, that in their school the use of active-participative strategies and methods are overutilized and the students are deprived by the informative benefits resulting from the implementation of the expositive type of teaching.

The rest of the paper is organized as follows. First, we begin by presenting the methodology we adopted in this paper. Then, based on the methodology adopted, we present the real life-situations for each topic of discussion and we analyze the possible dysfunctional consequences arising from each real-life situation. We propose then possible solutions to each situation and develop testable hypotheses which can be then the subject of future statistical analyses. We conclude by discussing this paper's limitations and we draw some possible lines of development for the future.

2. Methodology

In one sense, the scientific method used in this paper can be assimilated, to a certain degree, to the classical grounded theory method developed by Glaser and Strauss in 1967. The idea is the same as that proposed by the pioneering researchers in the 60's – trying to build a new theory or help refine the existent one – starting from empirical data with observations, interviewing and being immersed in the local culture (Glaser, Straus 1967/2012). From another methodological perspective, the research methodology used in this paper can be assimilated also to the classical research methods used by ethnographers. According to classical ethnographers, one should be immersed in the local culture, observe the social interactions and behaviors of local people for various years in order to understand the social phenomena in its detail and complexity (Brannen, 1996; Van Mannen, 1979). Despite the fact that in this paper we try to implement some elements of case study research and ethnography, the research methodology cannot be assimilated to either tradition. Rather, we would classify this paper such as a review/ theoretical paper – the empirical evidence being used only as a starting point for the purpose of contextualizing and problematizing the subject of interest in order to favour the analysis and open the discussions.

The outcome is a set of testable hypotheses developed from empirical evidence – as suggested by Eisenhardt (1989) – and resulting after consulting the existent literature in the fields of pedagogy and management. Eisenhardt (1988, 1989), Gilbert (2005) developed entire

new theories and developed new hypotheses starting with empirical data collected from various cases. The approach adopted in this paper is the same – developing some testable propositions from empirical data – but in our case the hypotheses are not developed from case study research. In this paper, the hypotheses are derived from real-life experiences, the researcher being immersed in the regional culture for many years. In other words, we developed some propositions as an output resulting from consulting the existent literature in the fields of pedagogy and management and after the application of some research methods and principles used in ethnography.

3. Literature review and hypotheses development

3.1 The educational ideal problem

3.1.1. Conceptualization and the real-life situation analysis

Education is not an activity developed randomly. All the educational activities have to achieve certain finalities (Ionescu *et al*., 1995). According to Miron Ionescu and collaborators (1995) the educational finalities can be divided in three levels: (1) the educational ideal – which synthesizes society's wishes and needs within a certain historical stage of development, postulating the social, psychological and pedagogical trends for the society development from a longer time perspective; (2) the educational scopes – representing educational finalities characterized by a medium level of abstraction, realizable in a shorter time, sketching specific scopes for education's profiles, schools, specializations or discipline; (3) the educational objectives – which represent specific educational finalities, formulated at the lowest level of abstraction, realizable after classes, sequences of classes or units of learning. From a socio-human perspective, the educational finalities can be classified also depending on their nature in the following categories (Albulescu, Albulescu, 1999): cognitive objectives (such as the dissemination and assimilation of information and knowledge), cognitive-formative objectives (such as the development of intellectual abilities like memory, attention, reflexive critical thinking, perception, attribution, creativity), affective objectives (such as the formation and development of character, feelings, and attitudes toward a certain thing) and psychomotor objectives (such as the ability to apply the knowledge to solve a certain practical problem or the development of technical and technological manual operations).

For the purpose of this paper we will focus our attention on the first level: the educational ideal. According to the Education Law in Romania (2011) ",the educational ideal of the Romanian school is the free, harmonious and integrative development of human personality, the formation of individual personality, the assimilation of the cultural values of the society, values which should nurture the entrepreneurial spirit, the successful integration of the person in the society and into the labour market". In order to transpose this educational ideal to a specific segment or industry, an important problem of management pedagogy, at university level, is the lack of alignment of management teachers and/or colleges/universities offering management courses to a common educational ideal. These types of programs are designed to contribute, at least theoretically, and judging after the scientific content studied, to *the formation of professional managers, able to effectively and efficiently administrate the organizations where they are going to work*. In consequence, I would say that this should be, or could be, the educational ideal nurturing the formation of future generations of students enrolled in management studies.

The educational ideal spans beyond the limits of a specific college/university, locality or region. The educational ideal is formulated at the society's and national level and it is postulated in a manner able to include society's needs and wishes regarding the future generations of graduates (Ionescu *et al*., 1995). The problem is that this educational ideal postulated for education conducted in Romania, applied or projected to the management education, ideal which should be broadly assumed by the management schools and teachers, is not broadly disseminated or enough understood along management professors. We would say that even if there are some management teachers, within some business and management schools, teaching and guiding their students in a reverse direction, compared with the educational ideal mentioned above. To support this assumption let's look at the first real-life scenario.

Scenario 1

Let's assume that we are observers in a class taught to management graduate students. The class is conducted by the teacher in an active-participative way using didactic methods such as the heuristic dialog and collective academic debates. The subject of the didactic debate is the motivation of people at work. After asking some

questions, one student – let's assume is the case of the Valedictorian – answered the question raised by the teacher saying:

"The theory X and theory Y represent a set of assumptions about the beliefs of managers regarding what motivates the people at work. The theory was developed by psychologist Douglas McGregor in 1958. We, as future managers, should understand these theories in order to better apply these principles in real-life companies." (Student, 25 years-old).

In this context, the teacher tells the student and the entire class the following statement:

"Whom told you that you are a manager when you finish the school? I heard you last year within the final festivity while you were saying in the graduation speech, we as future managers […] You are not a manager when you finish the management school." (Management teacher, 45 years-old).

In our view, this is a career ending statement. All the students who attended the class felt confused regarding what they were doing there, why they have registered for this management specialization and how their future is going to look like after graduation. The management teachers should encourage and explicitly assume the educational ideal of management education: *the formation of a new generation of managers*; and help the management students be aware regarding their future job and prepare them in accordance with this educational ideal. Instead, this real-life situation suggests that some management pedagogues are completely misaligned with the curriculum taught and the vision of the program as a whole. This situation is similar with telling a law school graduate that he/ she is not going to be a lawyer after graduation, and he/ she will be instead a seller in a retailing shop. Or, telling a medical school graduate that he/ she will not be a MD (medical doctor) instead he/ she will be a cashier. I mean, cashier by profession. We would say that this is one of the reasons why some many management graduates end their studies and employ themselves in jobs such as secretaries, workers in construction – under their level of expertise – or end in unemployment. If they are not supported and if they are discouraged by their mentors what they will become?

In this line of thinking, we would say that the problem of adaptation of an educational ideal, at least in the management education, is a very sensible and important

problem. The management educational ideal is different from the vision and mission of a specific program or management school. The educational ideal in management education should guide all the management programs in all the management schools and be embraced by all the management teachers in the direction of forming and developing professional managers for the future.

3.1.2. Discussion and adaptation of an educational ideal

This problem we would like to discuss in the beginning of the paper is one which may impact the management education in Romania as a whole. In Romania, the management as a scientific discipline, is taught in a systematic way starting at the college/ university level. There are specific bachelor and master programs designed to contribute to the understanding of the managerial work done in organizations by the students. However, many aspects related to the managerial work start earlier at the high school level, where the pupils are taking their first contact with the business world and the administration of firms and organizations. One can check the textbooks, accredited by the government, for teaching in high schools (Ministry of Education in Romania, 2019) and the formal planning and curriculum projection for high school technological education – available through the Institute for Educational Sciences In Romania (2019) – and see that all capture various facets of managerial activities done in organizations.

For instance, in *Planificare operațională* (Capotă *et al.* 2007; Ilie *et al.* 2006) the pupils enrolled in high schools take their first contact with fundamental managerial concepts such as organizational structure, organization's hierarchical levels, organization's objectives, resources analysis, types of production and more. In the same line of thinking, in *Tehnologia turismului*, Stănciulescu *et al.* (2003) discuss concepts and managerial problems related to operations management such as the internal organization of a tourism agency, the need to formulate a vision and mission for the new tourism agency, the authors even use concepts normally used in the strategic management. Also, in *Mediul concurenţial al afacerii*, Ilie and collaborators (2007) make a step forward and even introduce the pupils to the environmental analysis, treating aspects such as the identification of firm's competitors and analysis, realization of a SWOT analysis, and adaptation of the classical Porter's models (1980) and

(1985) for analyzing the industry. The idea is that all the authors mentioned above have started to apply and project managerial concepts, tools and methods, initially developed at university level for master and executive MBAs students, to the high school level.

According to the accredited textbooks (Ministry of Education in Romania, 2019) and the related formal planning mentioned above (Institute for Educational Sciences In Romania, 2019) the educational scope of these educational programs in high schools is to contribute to the formation of technicians in economic activities, technicians in tourism, technicians in hotels, technicians in commerce and services, banqueting organizer etc. Given these advances in curriculum projection and in the scientific content taught at the high school level – at the high school level there are various technicians in management related disciplines formed – what we propose in this paper is that at the college/ university level the programs developed in the scientific domain Management *should be specifically designed to form and develop professional managers*. This should be the educational ideal for the management education in Romania. After graduating one management program at college/university level you are a *manager*. You are not a technician, operational worker, analyst or other related or unrelated professions.

Management is the administration of an organization, or division/ unit of an organization, being a business, NGOs, public institution, political party or other type of organization. In this line of thinking, managers are the employees who manage an organization (Daft, 2010; Johns, 1996). There are four fundamental activities constituting the managerial work: planning, organizing, leading and controlling (Popa *et al*., 2013). In this paper, we would like also to make an important distinction between the professional managers and the so-called amateur managers. There are two types of amateur managers: (1) managers without management formation and (2) managers resulting from other understandings and approaches regarding the concept *management.* In the first category, there are graduates from other disciplines – related or totally unrelated to management – which think that they can do the manager's work without management formation. For example, an engineer or accountant promoted in a project management position without management education. In the second category, there are the managers in charge of specific tasks, which because of the lack of a better word/concept to describe their work

they are title as managers. For example, relationship manager, communication manager etc. We saw many times, in the real life, the different understandings and utilization of the concepts *management* and *manager*. In this paper, we discuss about the management of an organization and managers working in organizations.

In this context, we would say that there are only three types of managers: first-line managers, middle managers and top managers/executives (Popa *et al*., 2013). When we refer to a manager, we refer to at least to a first-line manager. For example, a team leader, a head of office, a project manager. There are no other types of professional managers – in this perspective – beyond the fundamental categories: first-line managers, middle managers and top managers. If one employee cannot situate itself in one of these hierarchical positions, he is not a manager. Rather, he/she should be regarded as a non-manager employee, operational worker, technician, or analyst. Now that we have clarified the concept *manager*, we can say that the educational ideal of the management pedagogy in Romania should be related to the formation of professional managers. Not technicians, not analysts, not operational workers.

This assumption and adaptation of this educational ideal for the management education is also supported by the European Qualification Framework (European Commission, 2019) and International Standard Classifications of Education (UNESCO, 2019). According to these international directives and regulations the graduates and undergraduates from management colleges and universities should possess after graduation management knowledge at an advanced level and highly specialized skills in the managerial work. In this line of thinking, they could and should start immediately after graduation working in a small, medium or large company, in different managerial positions, depending their level of competences. Since the subject of the paper is the educational ideal and the projection/ operationalization of this educational ideal to a lower level of abstraction – educational scope and objectives – next, we are going to provide some guidance regarding the pathways for integration in the workforce of the management graduates.

As one can see in the table no. 1, we would say that a graduate from a bachelor management program should occupy at least a first-line management position after graduation (e.g. team leader, operations manager, project

manager, head of office, shop manager etc.). In the same time, a master graduate in management should be contracted for a middle level managerial position (e.g. HR manager, production manager, marketing manager, division manager, business unit manager etc.). There is a third category of management graduates: the graduates from Executive MBA programs. In this line of thinking, we would say that because they possess also some managerial experience they automatically should be contracted as executives/top managers (e.g. CEO, COO, Chief Strategy Officer, region/ country manager, plant manager etc.). Regarding this guidance we would not enter in detail regarding the scepticism which may arise because of the lack of experience. The discussion would be very long. We would say here only that the companies should hire based on competences and not on experience and the common sense.

The same approach as we describe in this paper is the subject of implementation in other disciplines. For instance, psychology. In psychology, academics and professionals are trying to make a clear distinction between accredited psychologists – for instance, through the Romanian Collegium of Psychologists – and other type of psychologists non-accredited. The admission into the Romanian Collegium of Psychologists is based on clear procedures and rules which the members should comply with (David, 2006). I would say that a similar approach should be implemented also in the managerial education. You are not a professional manager if you do not have the formal education carried out in one accredited management school. According to David (2006) the academic psychologists are doing also several steps in trying to provide a framework for the employment of future psychologists according to their level of studies. The procedures are similar with those discussed in this paper, differentiating the employment of the psychology graduates depending their level of expertise – bachelor, master or even doctorate.

Table no. 1. Guidance for integration in the workforce of management graduates

Level of study	Position	Future perspectives for long time career development
Bachelor	First line managers → • Team leader, operations managers, project manager, head of office, shop manager	Middle managers → Top management/Executives
Master	Middle managers → • HR/marketing/production manager, Business Unit/Division manager	Top management/Executives
Executive MBA	Top management/Executives→ • CEO, COO, Chief Strategy Officer, country manager, plant manager	CEO

Through the alignment to a common educational ideal for the management education we do not refer to a socialist perspective or to other political views and ideologies which this concept may suggests. Instead, we refer to adopting a single direction for all the colleges and universities teaching management and perhaps more important, alignment of all management teachers to the same educational ideal. In this line of thinking, our ideas are supported by some recent findings. According to Porter (1998, 2003), Delgado *et al.* (2012) the competitive advantage of nations and regions comes from a regional perspective and alignment of the vision of the organizations operating into the region, under the same umbrella. Given Romania's affiliation to the UE we could assume that Romania should act as a region in the

European market and should act as a single player beyond nation's regional differences.

Evidence tells us that on the one hand the organizations in the same region should partner in regional clusters. On the other hand, these should not develop completely misaligned with the national or regional strategy. Of course, organizations have the political and legal rights to develop as they like, we live in a free market economy and democracy, but Porter's and his colleagues' assumption is that we – as a region – are not going to be truly competitive if each organization seeks only its interests and if the vision of the regional players are not aligned under the same direction (Delgado *et al.*, 2012; Porter, 1998, 2003). Our assumption is that we in Romania should align our vision regarding the management education under the same umbrella – and start developing from here – conceptualized here the educational ideal for the management education in Romania, education devoted specifically to the formation of new generations of managers.

Another contemporary concept is that of coopetition. Coopetition refers to collaboration and competition in the same time. Or, organizations which have convergent and divergent objectives (Bouncken *et al.*, 2016; Tiessen and Liton, 2000). In this competitive orientation, each school it is necessary to continue to have its vision, mission and individual strategy in order to stay competitive in the market. Also, there should be promoted relationships between universities and colleges teaching management programs based on a strong competition. But what we are referring to in this paper is that all the management schools and teachers in Romania should adopt an educational ideal related to the formation of professional managers for the future.

The idea is that the management graduates should have a clear pathway to follow along their careers, specific objectives regarding their formation, and formal procedures for the future, similar to their colleagues in other disciplines. For instance, future psychologists, future policemen, future officers in the army, future medical doctors, all have a clear pathway to follow after they graduate the university. A recent graduate from Police Academy will start working as a police officer/ lieutenant/ sub-inspector not as a sergeant and she/ he will follow a clear pathway toward the top. Why is that in

Romania we cannot give our future management graduates a clear pathway and a clear guidance toward the future?

As a conclusion, there can be various benefits of the adaptation of an educational ideal for the management education. For instance, the adaptation of an educational ideal and the design of a clear pathway for career development will act as a school counselling service for the students. Earlier the students understand these pathways, better the ulterior performances obtained. In the same time, the adoption of an educational ideal: (1) may help better allocate the resources for preparing the future generations of managers, (2) may increase the integration of management graduates in the workforce in their specialization, (3) may help refine, optimize and improve the management education programs, (4) may help to align management schools' objectives with the business world scopes and intentions, (5) may help the business world to understand the pathways for starting and developing the careers of their managers. In conclusion, better managers for the future. Thus:

H1: There is a direct relationship between the assimilation of a management educational ideal along the teachers in management schools and the performance of the future generations of management graduates.

H2: There is a direct relationship between the assimilation of a management educational ideal along the teachers in management schools and the performance of the region as a whole.

3.2 The problem with the extra-use of active-participative didactic strategies

Other important topic in the management pedagogy is the relationship between the use of active-participative didactic strategies and methods such as the heuristic conversation, didactic dialog, problematization, or case studies (Ionescu *et al.*, 1995), and the learning achieved by the students. The idea is that many management teachers have misunderstood the essence of these modalities for teaching and through mixing the methods they hope the students would learn in a modern way the scientific content, when in fact they don't. What they actually do is that some of them try to replace the classical lectures held by the docent with presentations held by

students. In this modality, the scientific content is presented by the student and not by the teacher. It seems that what they have not understood is that the active-participative didactic strategies should *complement* the expositive ones, and not try to substitute or replace the expositive strategies. In support of this assumption, let's look to a second real-life scenario. In this scenario, we discuss how the extra-use of active-participative didactic strategies may in fact impoverish the learning to be achieved. This scenario is captured from reality but for confidentiality reasons we would not say the name of the institution where the case occurred and the actors involved.

Scenario 2

Let's say that for the discipline X the professor came to the class at the beginning of the semester and gives the students some textbooks to make essays regarding one specific topic they like. The students need to choose three topics which will be then presented – using a Power Point presentation – in three different classes. Next, starting with the second class, each week, according to the schedule drawn, some students need to prepare and present the essay elaborated. More specifically, each weak the class will consist of students' essay presentations and discussion on the essay elaborated. In this mode, the teacher hopes that can cover the entire curriculum through students' presentations. This is all the learning the students will experience during the semester for this discipline. The students, single or in groups, need to present three essays during the semester which will be then graded by the teacher, in order to establish the final note. In this scenario of teaching, the students are involved in the educational operations in order to prepare the class, the teacher is exempt from elaborating the didactic material and instead, acts as an evaluator and a facilitator only from the outside, acting in fact as a coach standing aside.

Despite the formative benefits this strategy may have, such as the development of cognitive and intellectual abilities, project writing abilities, critical thinking or public speaking abilities (Albulescu, Albulescu, 1999) there are both some important aspects neglected by the teachers using *only* this strategy for learning and important drawbacks. Firstly, despite the fact that some students may have developed already presentation and

public speaking abilities some of them may experience problems to present their work, could be shy, or simply may encounter difficulties in presenting the scientific content. The goal of the class, as a whole, for each particular lesson, is that all the students would assimilate the scientific content as efficiently as possible. If during the lesson, let's say from four presentations three are presentations of bad quality, the learning performed by the class as regards the scientific content is almost nullified. For this reason, we would say that the scientific content cannot be delegated to the students, which in most of the cases do not have the presentation abilities that teachers have. More than that, for this reason, the teachers attend modules and programs devoted to the formation of teachers for the academic career.

Secondly, students may extract from the textbooks and present only the parts they like or they understand, and which fit with their interests. For example, if for a class in organizational behavior there are colleagues with a background in technical education and they are not familiar with the personality traits of persons they will synthesize and present only what they understand. Additionally, the presentation made by them can be very abstract and only skim the content at the surface. In the same time, some of them could not be very interested in developing presentation abilities and project writing abilities and be more interested in assimilating updated knowledge, in order to apply this knowledge in real-life companies after graduation. For these students, this strategy for teaching will have poor benefits, because they search for new information, valuable and updated. The formative abilities are not the priority for them as they look for the informative benefits of teaching. In this line of thinking, the problem with teaching only in this active-participative modality is that some important aspects in the curriculum could be omitted by the students and in consequence the learning achieved by the class would be, again, very poor.

Third, students could present the scientific content in an illogical and unsystematic way, according to their preferences and not according to the scientific rigor and the logic of the discipline. It means that students may elaborate essays on the topics they like and the scientific content which should be acquired by their colleagues during the essay's presentation could be mixed and not be presented in a systematic and logical manner. Using

informative didactics methods such as lectures, exposures, or narratives the teachers could present the scientific content in a logical way, according to the formalized plan and according to the logic of the discipline. There is a greater probability that all the students will learn the essentials of a particular discipline if the scientific content is designed, elaborated and presented in a logical and systematically way by the professor. And back to our supposition, again, from the informative perspective, the learning achieved in this teaching scenario is very poor.

Fourthly, the students may simply introduce fake information/errors in the presentation. From another perspective, they may introduce in their essays and presentations their points of view, wittingly or unwittingly, which are based on the common sense and not supported by evidence as is the case of the scientific knowledge. Teachers who only supervise the presentation may not be aware of all the errors which can appear during the presentation. Probably, we cannot identify the errors transmitted in oral communication as well as we identify them in writing and when we devote time particularly to this task. If the teacher only supervises the oral presentations made by students and assume that all the information transmitted by the presenter is valid, the rest of the class may learn fake information and pseudo-science. Another reason in support of the assumption is that there should be also a clear expositive didactic strategy put in place in order to present the scientific knowledge to the students by the professor, in a systematic and logical way.

In this line of thinking, the presentations held by the students represent a powerful didactic method in order to develop their public speaking abilities, prepare them for the academic career, develop their interaction abilities and many other benefits. The individual or group elaboration of essays and projects, contributes also to the development of cognitive-formative abilities such as synthesis, analysis, induction, deduction, analogy, critical thinking, the development of convergent and divergent ideas (Albulescu, Albulescu, 1999). Nevertheless, the active-participative teaching strategy discussed above has an important contribution to the formation of specific abilities within the formative dimension of education. Given the arguments presented above, the author's assumption is not that this active-participative strategy is

inefficient per see. The problem is that this strategy may be over-utilized and extra-used by some management teachers at the expense of the expositive related teaching strategies. In short, the author's preoccupation is that too much emphasizing has been given to teaching through active-participative didactic strategies, at the expense of the expositive ones, at least in the field of management.

In this paper we do not analyze the scientific content transmitted to the students or the quantity of the information disseminated through lectures. Of course, according to modern didactic principles only the most important realizations, aspects and essential information regarding the social life should be taught to the students (Albulescu, Albulescu, 1999). The idea is that this essential information is necessary to be disseminated to students and cannot be omitted or neglected by teachers. There should be implemented a clear and a logical expositive strategy, through which the students can learn the scientific content, together with the formative dedicated active-participative didactic strategies and methods.

In conclusion, if the goal of teaching and learning is, according to modern didactic principles, to keep a balance between the informative and formative nature of teaching, to contribute to both the achievement of cognitive objectives but also to the development of affective and psychomotor related abilities (Albulescu, Albulescu, 1999), to transmit the values and the knowledge embedded in the society (Bocoș & Jucan, 2019; Ionescu *et al*., 1995), the teachers in the managerial education should not skip, neglect or omit the informative benefits and the power of exposures, lectures and narratives. The formative dimension of the management education should only complement the informative one, and not try to substitute or replace it.

In consequence, we would say that the learning achieved by the students in the management education and the performance of future management graduates in their workplace, educational finalities cultivated through an active-participative didactic strategy will grow until a certain point. After this point, the extra-use of active-participative methods will determine both the learning achieved by the students and the probability of future workplace performances to start decreasing. Thus:

H3: There is an inverted U shape relationship between the use of active-participative didactic strategies and the learning achieved by students in the management education.

H4: There is an inverted U shape relationship between the use of active-participative didactic strategies and the workplace performance of future management graduates.

4. Limits and future avenues of research

There are several limits regarding the assumptions and hypotheses developed in the paper. Some of them result from the methods themselves and some of them are related to the theories in pedagogy and management.

From a methodological perspective, the first limit has to do with the scarcity of the empirical evidence and the possibility of the uniqueness of the case. Both real-life situations described in the paper are based on real facts but for confidentiality motives the author did not want to give more details regarding the context and the authors involved. Also, the degree of use of active-participative strategies for teaching may differ in other universities, regions or countries. In other words, in other colleges/ universities offering management programs, other regions or countries, the management professors may use in equilibrium the expositive and the active-participative strategies. This equilibrium could be also maintained by other management teachers in the same institution. Therefore, not all the teachers in the same institution, i.e. teaching management, cultivate in an imbalanced manner the informative and formative dimensions of teaching and learning. Regarding the first topic in our discussion, the degree of management pedagogues aligning to the educational ideal described in this paper could be different. Some of them align more some of them less.

These limits may favour and represent starting points and/ or opportunities for the development of new studies (case studies, statistical analyses or questionnaires-based studies). For instance, there can be developed in-depth case studies in order to see why the teachers in management schools use only active-participative strategies at the expense of the expositive ones. Other studies can try to emphasize the degree of balance between the use of expositive and active-participative didactics strategies through a questionnaire applied to a

sample of management teachers. In a similar direction, some studies can be developed in order to point out the degree of alignment of the management docents to the educational ideal developed in this paper.

Despite these important limitations, the paper has developed some important ideas and discussed some problems encountered in the management education in Romania. The propositions developed can be transferred to other contexts with careful consideration (Welch & Piekkari, 2017) or can be sharpened, improved and be the subject of future statistical analyses (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). From the point of view of a research's lifecycle (Eisenhardt, 1989; Eisenhardt and Graebner, 2007) the position of this paper is exploratory implying a first step in trying to solve the problems in discussion. The propositions developed should stay at the base of future statistical analyses to see (1) if the lack of alignment to an educational ideal and (2) the extra-use of active-participative didactics strategies are not idiosyncratic phenomena.

5. Conclusions

In this paper we have discussed two important problems occurring in the management education in Romania. The first one is the lack of alignment of the formation of management students to the same educational ideal. We have proposed that the universities and colleges offering management programs should explicitly (1) mention that the objectives of the management programs are designed to contribute to the formation of a new generation of managers, (2) mention in their brochures, formalized plans and strategies the pathway their future management graduates may pursue along their career. Both solutions are regarded as operational tools/ solutions in order to implement and operationalize the educational ideal for the managerial education in Romania. The second problem brought into the debate was the fact that in some management schools the use of active-participative didactic strategies is over-utilized/ extra-used. The author has suggested that in line with modern didactic principles there should be a balance/equilibrium between the informative and formative dimensions of the management education. A central idea is that the active-participative didactic strategies and methods should only complement the expositive oriented strategies and methods. The formative

dimension should not try to replace or substitute the informative dimension. There are lots of benefits resulting from lectures, exposure, narratives and other expositive strategies and methods. Both problems were regarded and discussed in the context of the management education at college/ university level.

I will expect that many of you will criticize the paper regarding aspects such as: where is the rich evidence for what are you saying, how can you generalize these ideas to other contexts, how can we be sure that the situation is not idiosyncratic, how did you analyze the empirical data. To many of these questions, I hope I have provided already an answer within the methods and limits sections. However, I wish to remember the readers that the idea of this paper was to bring in discussion and in the attention of pedagogy and management researchers and teachers some drawbacks and problems occurring in teaching management at college/university level. I have tried to provide some ideas and solutions in order to solve these problems. The purpose was not to discuss *why* these situations occur – question suitable to be answered through an in-depth case study research strategy – nor in *how many* similar situations these problems occur – question suitable to be answered by a questionnaire and/or statistical analysis of data (Yin, 1984/2014). Instead, what I have tried to do in the present manuscript was to bring in discussion some possible situations within which the use of active-participative didactic strategies is not appropriate and why the misalignment of the teaching management could hamper the learning achieved and the performance of future management graduates at their workplace. Despite the fact that we should continue promoting proactiveness, risk taking, innovativeness, a strong competition, in short, an entrepreneurial orientation (Bouncken *et.al*, 2014; Hitt *et al.*, 2007) within and between management schools we should not forget that the management education in Romania should be aligned to a common educational ideal, designed to educate and develop new generations of managers.

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Experimenting with the integrative operational objectives formulated in integrated activities performed in kindergartens from Sălaj county

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Experimenting with the integrative operational objectives formulated in integrated activities performed in kindergartens from Sălaj county

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Abstract	The reform that the Romanian school system is currently facing is of utmost importance and is marked by the tendency of the educational institutions to undergo continuous improvement, by the changes in society and the influence of the European school systems.
Keywords: integrative operational objectives; integrated activities.	In our research, we started from the premise that the operationalization of the objectives is an absolutely necessary condition for the educational objectives to be usable in the practice of designing, realizing and evaluating the educational activities. Our proposal is to use the concept of integrative operational objective for the integrated learning contexts specific to the integrated didactic activities.
Zusammenfasung	Die Veränderungen, denen sich das rumänische Schulsystem gegenübersieht, sind heute wichtiger denn je. Sie zeichnen sich durch die Tendenz der lernenden Institutionen aus, sich kontinuierlich zu verbessern, die Veränderungen in der Gesellschaft und die Einflüsse des europäischen Schulsystems.
Schlüsselworte: integrative operative Ziele; integrierte Aktivitäten.	In unserer Forschung gingen wir davon aus, dass die Operationalisierung von Zielen eine unabdingbare Voraussetzung für die Verwendung von Bildungszielen für die Gestaltung, Durchführung und Bewertung von Bildungsaktivitäten ist. Unser Vorschlag ist, das Konzept des integrativen operativen Ziels für integrierte Lernkontexte zu verwenden, die für integrierte Lehraktivitäten spezifisch sind.

1. Introduction

According to Law no. 4.694/2.08.2019 passed by the Ministry of Education and concerning preschool level, starting with year 2019, a new curriculum shall be applied. This one would focus on developing competences that are meant to assure the development of key competences later on in life (Curriculum pentru Educaţia Timpurie, 2019, p. 14).

The Methodical letter for the school year 2019-2020, aside from the new elements added by the curriculum, states that the integrative activities are one of the stability aspects (anchors) that supports an easy integration of the new curriculum (Scrisoarea metodică pentru anul școlar 2019-2020, Nr. 38407/ 01.10.2019, p. 4).

This research continues the approach undertaken between 2013 to 2017 that was directed towards applying and explaining the integrative operational objectives in the integrated activities that took place in the kindergartens from Sălaj County.

All the studies and interviews conducted at school inspections in that period led to the conclusion that teachers needed to attend training courses. These trainings were meant to clarify how to design and conduct integrated activities and how exactly to formulate integrative operational objectives (i.o.o.). The integrative operational objective (of the integrated didactic activity) represents a type of operational objective formulated so as to explain the level/ area of integration of the content which is to be inserted in certain integrated didactic activities which are supposed to be transmitted, modeled and assimilated (Bocoș, (coord.), Răduț-Taciu, Stan, 2018).

Therefore, in November-December 2017 the training course "Innovative approaches in the specific didactics of primary and pre-school education" was organized. A

number of 80 educators benefited from a training session provided by the Babeş-Bolyai University Cluj-Napoca - Năsăud Extension, aimed at formulating the operational objectives, to which we added explanations regarding the formulation of the integrative operational objectives. In order to identify the impact that the course had on the teachers' ability to formulate integrative operational objectives, during the period January-May 2018 school inspections and demonstrative activities were organized and methodological-scientific reports were written in each methodical center.

2. Methodology

In January and May 2018, the coordinators of methodical centres in Sălaj were asked to collect the activity projects and the methodological-scientific reports written by the teachers who held activities during the meetings organized in the first and in the second semester of the 2017-2018 school year. Afterwards, the documents were analysed and for a number of 81 didactic projects and reports were identified the strengths and the areas of improvement. Main concerns were:

- formulation of operational objectives;
- formulating the integrating operational objective;
- the teaching methods - modern vs. traditional;
- the didactic means used;
- the weight of the frontal activity vs. group/ individual activity;
- contents - informative vs. formative;
- types of evaluation;
- the scenario of the integrated activity;
- correlations between the components of the teaching act, strategies and evaluation;
- the methodological-scientific reports (the quality of the information, their relevance to the topic, the methodical suggestions, bibliographic references, language used, terminology mastery, the realism of the approaches, the degree of applicability, the degree of originality).

During the same period, January-May 2018, semi-structured interviews were conducted with 21 of the teachers who organised school inspections in order to obtain their teaching qualifications from which:

- final grade - 5 teachers;
- current / special grade II - 8 teachers;
- current / special grade I - 8 teachers.

3. Results

Following the analysis of the activity projects and the methodological-scientific reports, it was found that:

- the operational objectives were, in general, clear and relevant. Still, they were not always formulated according to Mager's Technique (Bocoş, Jucan, 2019);
- and sometimes the level of performance was omitted;
- there were also projects in which many objectives and complex formulas were set and thus it was difficult to follow whether the objective was achieved for each child or not;
- in the combined groups the objectives rarely reflected the differentiated approach according to the age of the children;
- in most integrated activity projects, where the integrating operational objective was formulated, an effort was made to reveal, by formulation, the way of integrating the contents from two or more disciplines / experiential fields (58 projects - 71.60%);
- there are numerous projects in which, starting from the formulation of the i.o.o. and of the didactic scenario, it appears that the training/ teaching-learning sequences of the contents from two or more disciplines/ experiential fields were made consecutively, which suggests that either the methodology of formulating the i.o.o. was not understood, or the activities were carried out, practically, in relation to the disciplines and switching from one activity to the other was made through a transition stage (32 projects - 39.50%);
- there were also projects carried out at disciplines where implicitly there was no i.o.o. formulated (23 projects from the rural area - 28.39%), which may suggest that, if at the moment of inspection (methodical visit) the integrated activities were not designed and carried out by the educators, then, probably they were not at all designed and developed in the day by day activity of teachers in the rural area;

- in general, both the contents and the forms of evaluation were in accordance with the operational objectives set (including i.o.o.);
- modern, interactive methods were used in most projects for integrated activities;
- the didactic means were rich and different, they followed the characteristics of a valuable didactic material, both from an aesthetic point of view and from the perspective of their usefulness and most were made by the teachers' themselves;
- all types of class organization were present, but in some cases, the frontal activity predominated when two activities for experiential domains were integrated (ADE). The activities in small and individual groups were more common in the full day integrated activities;
- for consolidation and evaluation activities, the informative aspect prevailed in the presentation of the contents;
- the types of evaluation were documented in reports, but it is difficult to appreciate based on such documents how much of the child's progress was taken into account;
- the formative evaluation was present (behavioral observation, oral questioning, positive feedback);
- the evaluation referred to the proposed objectives (including i.o.o.), and the children were also involved in the evaluation process (self-evaluation was sometimes present in the design);
- the contents transmitted were accessible so as to allow the children to understand quite abstract notions such as: the beauty in nature, the beauty in art, the harmony, the rhythm, etc.;
- the activity scenario existed in many of the projects and the description clearly showed the flow of the didactic events (integrated activity projects were presented without a didactic scenario such as the discipline-specific projects that did not require a didactic scenario);
- where elaborated, the activity scenarios were well designed, presented in detail, offering a good overview of the didactic approach;
- in the activity projects the didactic events were recorded in the corresponding section, the detail of the activity, for each moment, was brief, but relevant;

- the methodological-scientific reports comprised theoretical aspects on topics under debate, as well as ways of carrying out the activities, but the examples of good practice from personal experience were scarcely reflected in the documents;
- there were reports that had used the same bibliographic sources, but the author's personal contribution would bring extra originality if personal experience in relation to the group of children in the kindergarten was promoted;
- the information in the reports was relevant to the topic, there were also methodological suggestions and bibliographic references; the language used was, in general, colloquial, the degree of mastery of the terminology differed from case to case;
- two of the reports received in a methodical centre were copied largely from the Internet, being almost identical in content to the source text.

Following the analysis of the school documents and the interviews conducted with a number of 21 teachers that have been evaluated, it was found that:

- they have designed and carried out integrated activities, on average 1-2 per week (85.72%), respectively 3-4 (14.28%);
- 89.25% integrate disciplines from experiential fields (ADE - activities for experiential domains);
- 61% of the respondents identify a series of benefits of conducting formulation and follow-up of the i.o.o., both in relation to the integration of the contents, as well as to the evaluation and elaboration of the didactic tasks;
- 71.42% of the educators appreciate that i.o.o. should be formulated for all / most of the integrated activities, 19% - do not express an opinion or consider that the impact of its formulation on the didactic design should be investigated, and 9.52% consider that it should not be used;
- 28.57% of the respondents reported difficulties facing the formulation of i.o.o., 4.76% considered that the thinking time to formulate an i.o.o. is quite long, and 14.28% state that they cannot formulate it for all integrated activities.

4. Conclusions

Following the analysis of the activity projects and the methodological-scientific reports, one considers that it is necessary to take some improvement measures:

- the elaboration of a methodical letter, at county / country level, specifying aspects related to the formulation of objectives (a list of verbs that target observable behaviors), the stages of each activity, the correct identification of the types of evaluation, the way of recording sequentially the teaching strategies, with examples of activity projects (integrated activities);
- practice within the methodical meetings the formulation of the operational objectives by using Mager's Technique (M. Bocoş, D. Jucan, 2019) and the formulation of the integrative operational objectives;
- for the correct elaboration of the integrating operational objective, it would be useful to present as many examples as possible of the formulation of the integrative objective, reflecting combinations of objectives from different disciplines/ domains of experience and to promote them among teachers;
- encouraging and appreciating the use of modern methods/ the recommendation to use in designing activities at least one interactive method on each integrated activity, along with the traditional ones;
- to detail, in the integrated activity project, each stage of the activity, not just the simple review of the contents related to it, because such an activity project does not clearly reflect what the proponent wants to achieve and the way he/ she does it;
- to design the didactic scenario for each type of integrated activity;
- the methodological-scientific reports should reflect how the teacher approached the proposed topic in practice;
- the participating teachers, in their interventions at the pedagogical/ methodical meeting, shall discuss the topic not only regarding the demonstrative activity pursued/ the methodological-scientific report audited, but also to bring to the attention of the auditor aspects of personal experience in the class (in the individual notebook shall be found previously studied topics discussed within the methodological meetings and the pedagogical gathering);
- the study by the educators of the guides that offer suggestions for the elaboration of the projects of integrated activities and more concern for both the form and the content of the documents (some projects contain spelling mistakes, there is a lack of interest for complying with the writing standards, elliptical contents, lack of coherence and superficiality in the presentation of the teaching approach).

Following the interviews with the teachers who have organized school inspections, some needs arise:

- organize meetings with mentors to explain and practice writing i.o.o.;
- stimulating the teachers to study and constantly practice formulating integrative operational objectives.

It can be argued that most of the participants in the study appreciated the usefulness of formulating and pursuing integrated operational objectives for integrated activities, but there were educators who found it difficult to formulate and continue to seek advice and guidance, both for designing integrated activities and for formulating operational integrator objectives.

Authors note:

The authors have equal contributions to this article.

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The optimization of academic motivation for 3rd class students throught the learning process

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The optimization of academic motivation for 3rd class students throught the learning process

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Abstract	
Keywords: academic motivation, self-efficacy, educational intervention program	Motivation refers to reasons that underlie behavior that is characterized by willingness and volition. Motivation, that which energises and directs behaviour toward a goal (Eggen & Kauchak, 1994), could certainly be perceived as one of the most important psychological concepts in education. It is an inner desire and drive required for successful performance. The aim of this research was to determine the factors that inhibit pupils school success and to develop a intervention programme to increase the academic motivation among 3rd grades pupils. Empirically, the intervention programme based on Bandura's self-efficacy theory (Bandura, 1977), the expectancy-value theory (Eccles & Wigfield, 2002) and the self-determination theory (SDT, Deci & Ryan, 2000). The results showed that the proposed intervention programme had a significant impact on increasing the academic motivation of the participants ($t(19) = 15.87$, $p=0.00$, $d=3.4$).

Zusammenfasung	
Schlüsselworte: Lernmotivation, Selbstwirksamkeit, pädagogisches Interventions-programm.	Motivation bezieht sich auf die Gründe, die der Annahme eines von Begehren und Willen geprägten Verhaltens zugrunde liegen. Motivation, die das Verhalten anregt und auf ein Ziel lenkt (Eggen & Kauchak, 1994), kann als das wichtigste psychologische Konzept in der Erziehung angesehen werden. Es ist ein inneres Verlangen und eine Orientierungsquelle für die Erreichung akademischer Leistungen. Ziel dieser Forschung war es, die Faktoren zu ermitteln, die den Bildungserfolg der Schüler beeinträchtigen, und ein Interventionsprogramm zu entwickeln, um die akademische Motivation der Schüler der dritten Klasse zu steigern. Das Interventionsprogramm basiert empirisch auf der Theorie der Selbstwirksamkeit (Bandura, 1977), der Erwartungswerttheorie (Eccles & Wigfield, 2002) bzw. der Theorie der Selbstbestimmung (SDT, Deci & Ryan, 2000). Die Ergebnisse zeigten, dass das vorgeschlagene Interventionsprogramm einen signifikanten Einfluss auf die Steigerung der Schulmotivation der in die Studie einbezogenen Teilnehmer hatte ($t(19) = 15.87$, $p = 0.00$, $d = 3.4$).

1. Introduction

Motivation is fundamental for an effective learning because it has the power to activate and guide the behaviour and the level of responsibility which any child manifests during this activity as a student. Motivation must be stimulated from a young age along with the learning abilities, because as time goes by, these might undergo changes due to feeble influence.

According to the general definition provided by Schunk and colaborators (2008), motivation is the process whereby goal-directed activities are instigated and sustained. While in school context "motivation refers to a student's willingness, need, desire and compulsion to participate in, and be successful in the learning process"

The students' involvement in the school context refers to the behavioural activities which came out as a result of the motivational beliefs; involvement which can be described in terms of intensity, persistence and behaviors directed to school assignment.

2. Theoretical foundation

A well-focused literature review indicated that there are some studies which have researched students' development of motivation. It has been observed that during primary school, some motivational values are decreasing; such as intrinsic motivation (Gottfried et. al., 2001), appraisal of the assignment (Jacobs et. al., 2002; Spinath & Spinath, 2005) and the direction toward the assignment (Bong, 2001).

The valorization of the learning experience depends on the personal source of motivation:

- *Extrinsic motivation* is associated with the attainment of some kind of reward (grades, award, medals) (Krause et. al., 2003).
- *Social motivation* is associated with the recognition of their accomplishments from relevant individuals (teachers, parents). This type of motivation is distinctive from the pure extrinsic motivation due to the fact that for a child it is important the way in which an adult is rapporting himself to the child, not the reward itself.
- *Performance motivation* is referring to that type of motivation associated with the need of being in a competition and the need of showing one's superiority towards others. Performance motivation has two subdivisions (McClelland, Kostner & Weinberger, 1989):

- Motivations derived from the need of success, usually at children who tend to be competitive and try to demonstrate that they succeed and can be better than the others.

- Motivations derived from avoiding failure, usually at children who are trying to avoid situations in which they believe they might not succeed, in order to protect their self-esteem and self-efficacy.

- *Intrinsic motivation* refers to doing an activity for the inherent satisfaction it brings. This type of motivation has as its base the interest, curiosity and the need of developing their own abilities. The level of motivation varies based on the individual's perception over the level of difficulty of the material (Krause et. al., 2003):

- If the material is too accessible, then the activity is not perceived as a challenge, as a result is considered as being dull, therefore the intrinsic motivation is reduced.

- If the material is too demanding because of the lack of abilities, then the intrinsic motivation is reduced.

- If the material is perceived as being accessible, then the intrinsic motivation tends to grow.

For the most times, students' behavior and the attainment of academic performance are in a strong relationship with school motivation (Mclnerney & Marti, 2006; Smith, Duda, Allen & Hall, 2002).

According to Midgley and his collaborators (1996) a student considers himself motivated only in situations in which:

1) prefers a certain activity over another one
2) initiates and takes part in activities linked to that activity
3) persists until the activity is over, even though it had encountered difficulties.

Martin (2009) had proposed a distinction between the adaptive factors and the maladaptative ones over students' motivation. The following adaptive factors may be taken into account:

1. Self-efficacy: It refers to students' trust in his own abilities to organize and perform the necessary activities in order to produce certain accomplishments (Bandura, 1997). Students' self-persuasion regarding their capacities in certain academic fields can influence the selection of the activities, effort, perseverance and their vulnerability to stress and depression.

Numerous empirical studies realized in the field of educational psycology (Lau, Liem & Nie, 2008; Schunk, Pintrich & Meece, 2008) have demonstrated that, students with a high level of self-efficacy are more likely to invest more effort in the learning process and to engage themselves in learning activites in order to obtain optimal academic performance.

2. Interests: these represents important constructs in school activities, because they reflect the potential of each student and the inherent tendency to learn (Ryan & Deci, 2000). The interest is presented in the academic context as a motivational source which allows the students to participate actively in the learning activities, holds positive skills and persists during the learning process (Hidi & Ainley, 2002; Katz, Assor, Kanat-Maymon & Bereby-Meyer, 2006; Linnenbrink- Garcia et. al., 2010).

3. Mastery goal orientation: students with a high level of mastery goal orientation have a tendency towards in cognitive activities which stimulates them more (Seifert, 2004), they tend to be more hard working when it comes to difficult activities (Ryan & Pintrich, 1998), and are capable of keeping their interest in the learning process (Robins & Pals, 2002).

4. Commitment: is a key-factor which contributes to the quality of learning and to school success (Skinner, Furrer, Marchand & Kindermann, 2008). Students' commitment to the learning activities preserve their effort, determinism and perseverance- factors which lead to a favorable result in the academic process (Fredricks, Blumenfeld, Paris, 2004).

The maladaptive factors of motivation are avoidance coping and effort withdrawal. Avoidance coping refers to the students' tendence to quite the activity when it is difficult or dull. Effort withdrawal represents the students' tendence to minimize the amount of effort for the academic process (Meece, Blumenfeld & Hoyle, 1988; Nicholls, Patashnick & Nolen, 1985).

Studies related to the educational field have focused on two types of interests: individual interest and situational interest (Hidi & Renninger, 2006, Schunk et al., 2008), *the individual interest* refers to an interest that has a strong base, characterized by the need of developing certain abilities and to manifest involvement in the field, while *situational interest* is defined as temporary interest that arises spontaneously due to environmental factors such as task instructions in a certain context (Murphy și Alexander, 2000).

Research on the impact of interest in school point out the beneficial results interest has on the quality of the learning process, attention, objectives, school motivation, even school performance (Hidi & Renninger, 2006, Krapp, 2002, 2005, Wigfield & Cambria, 2010). Studies made on groups of students show that mastery goals are the precursors of interest, (Harackiewicz et al., 2000), which demonstrate the predictive value of the interest for performance (Harackiewicz et al., 2008, Tracey & Robbins, 2006) and also offers data regarding the fluctuations of interest during a course (Rotgans & Schmidt, 2011).

The effect of performance over the self perceptions of a student can be positive or negative. If a student succeed, during an activity in which he has engaged in a cognitive manner and has worked in order to solve it, he would estimate the experience as worth it. This fact is going to improve the student's self-esteem regarding his own activity and is going to make him to appreciate more this type of learning activities. At the same time, a failure may have a negative effect over the student's perceptions regarding his own abilities, making him to doubt about the possibilities of succeeding.

"Success or failure may depend on the correspondence between the aiming level and the final result. Thus, a completed action is accompanied by a sense of failure if it is below the aiming level and by a sense of success if it reaches or exceeds the aiming level of a person. Success or failure can result from the differences between goals and performance skills, especially among those who fear failure, which will lead to an increased motivation to avoid failure then the need to succeed." (Lupu, 2013, p. 47).

3. Research methodology

3.1. Purpose of research

The purpose of this research is to elaborate an intervention program personalized for 3rd class students regarding raising the motivational level during the learning process, as a result the following objective emerge:

- Students' evaluation involved in the study regarding motivation in the learning process.
- Identification of the probable cause which determine a decrease in the students' level of motivation and pointing out possible solutions that have emerged from an intervention programme.
- Implementing an intervention program in education in order to increase 3rd class students' academic motivation starting with the needs identified in the statement of findings.

3.2. Hypothesis and research variables

This study's hypothesis is the following:

The implementation of a stimulating program focused on achieving motivation during the learning process can help increase students' academic performance.

Independent variable: intervention program

Dependent variables: academic motivation

3.3. Participants

The participants of this study were the students of a 3rd class (No=20) from the Primary School with I-VIII

classes based in Viseul de Jos, Maramures country having the age between 9-10 years old with a mean age of 9 years and 4 months.

3.4. Instruments

Assessment questionnaire of motivation and engagement-version for junior school students (*Motivation and engagement scale- Junior School, Martin, 2009)*

This questionnaire can be used in schools by teachers, school counselors or psychologist in order to evaluate the motivational level of students. It can be used for children between 9 and 13 years old.

Students are going to answer to a set of questions on a Liker scale from 1 to 5, where 1 represents "strong disapproval" and 5 "strong approval", the time for answering the questions being limited. The score can be used in order to offer educational assistance, specific information for teachers and parents. This questionnaire has 18 items organized as follows: perseverance (3 items), concentration (2 items), planification (2 items), engagement(2 items), uncertainties (2 items), anxiety (3 items), fear of failure (1 item), school valorization (2 items), self-encouragement (1 item).

This scale can be filled in pen on a sheet paper by students. Regarding the reliability and validity of this questionnaire, Martin(2009) has it validated on a group of australian students from .63 classes and 15 schools obtaining a α Cronbach .78 coefficient while the test version got a .61 coefficient.

3.5. Procedure

For testing the hypothesis of this research it has been used an experimental design and the research took 3 month (february 2017 - april 2017).

The dependent variable of this research is the students' motivation (measured with the help of the *Assessment*

questionnaire of motivation and engagement - version for junior school students. (MES-JR) and the interventional program represents the independent variable.

On the *pre-test* stage the focus was on evaluating the children in order to obtain information and referential data, necessary for the program's development. After gathering the results and interpreting them it was noticeable that they possess a decreased level of academic motivation during the learning process and I decided to elaborate an interventional program" Learning with pleasure" which had the goal to develop a set of educational activities which are going to develop the motivational level regarding the learning process.

The *post-testing* stage took place the following week after the program was finished consisting on implementing the same investigational program in order to establish the effectiveness of the educational program.

The interventional program **"Learning with pleasure"** has an empirical base, the auto-efficacy theory (Bandura, 1977), expectation-value theory (Eccles & Wigfield, 2002), and the auto-determination theory (SDT, Deci & Ryan, 2000).

The intervention took place during the first half of the first semester of the school year 2016-2017. The meetings took place during the personal development classes.

For developing the neccesary activities of the interventional program, were taken into consideration the learning components organised into modules from the curriculum aria "counseling, orientation, personal development for I-IV classes". The following themes were choosen "Learning management" (content: evaluation of the leaning process) and "Effective learning planning" (content: perseverance, organisation, emotional resistence). Thus, for the *Effective learning planning* were used woorksheets from the educational program Yes, You can, You can make it !"(Bernard, 2005).

4. Results

For the study's hypothesis was used test t for paired samples in order to observe if the proposed program had an influence over the variables measured for the study's participants.

Table no. 1. Descriptive statistics

			Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Academic motivation intervention	before	3,30	20	,26	,058
	Academic motivation intervention	after	4,29	20	,23	,053

Analyzing the results from *Descriptive Statistics* it can be observed that the academic motivation before the intervention was at 3.30 (SD= 0,26) and after the intervention was at 4.29 (SD= 0.23)

Table no. 2. Paired Samples t test Results

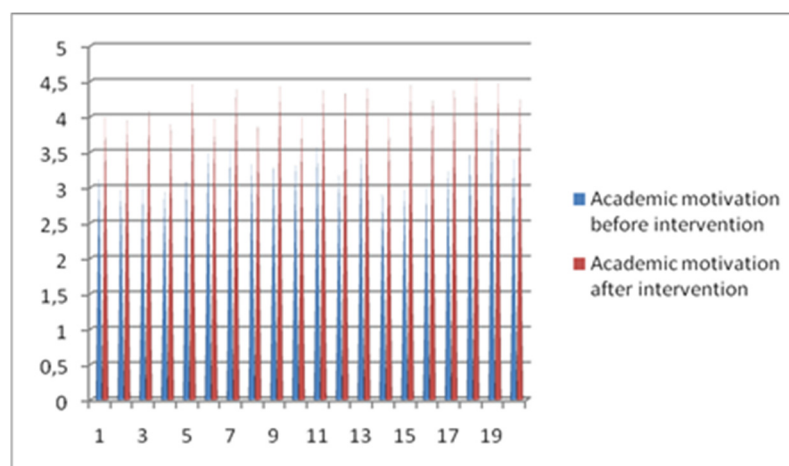|	Pre-test		Pos-test			95% CI for Mean Difference			
Outcome	M	SD	M	SD	n		r	t	df
Academic motivation	3.30	.26	4.29	.23	20	-1.12; -.85	.38	15.8[*]	19

[*] p< 0.01

Figure no. 1. Representation of the variable measured according to the experimental phase of the participants included in the study

In the table no. 2 are presented the results for test t for pairs. Thus, after reviewing the result, it was obtained $t_{(19)}$ = 15,87, p=0.00, because has a semnificative level, it can be seen that there is an important difference between the pre-test and post-test conditions. Calculating the effect for this two pairs, we obtained d=3,4 which means according to Cohen's criterias (1988), that the interventional program **"Learning with pleasure"** had a strong effect in raising the level of academic motivation among the

students who had participated in the study. To conclude, **the hypothesis of the study is confirmed**.

5. Conclusions

The learning motivation influences the learning process itself and also the results of the process. Motivation energizes and facilitates the learning process through intensifying the effort and the students' attention by creating a preparing mood for the learning activity.

The general and specific motivations which activate, orient and sustain our behaviour are the result of our interactions between personal characteristics and opportunities/ environmental constraints. The analysis of the factors which have an influence over motivation have a high relevance for the teaching process. These factors can action both as enhancers and inhibitors regarding the students' involvement in the learning process. Motivational factors can be organized in two major categories: *internal factors* (these reffer to the personal characteristics, both predominantly inborn, but also acquired and stabilized over time) and *external factors* (represented by the general or specific contextual influences).

Presence plays an important role for the educational dynamic. It is also a consequence of motivation because the more motivated a student is, the better his performance will be. A motivated student will persevere more, will use appropriate learning strategies that will influence his performance. The relationship between motivation and educational success doesn't have to be unilateral because performance too can influence motivation. Performance as a concret result of the learning activities becames for a student a source of information which influences his perceptions over his own competence.

Testing the interventional program "Learning with pleasure" over 20 subjects, we can confirm that this program has demonstrated its effectiveness regarding raising the level of academic motivation ($t_{(19)} = 15,87$, p=0.00) for 3rd class students.

We can confirm that the choice of activities created and applied in the program has highlighted the most important components of the successful raising of the students' academic motivation: assessing learning style, increasing persistence, planning effective learning.

One limitation that this study might encounter is the fact that the subjects of the study are students of the same class, thus this study does not have a high level of accuracy regarding the generalization of the obtained results. A second limitation might be the fact that the use of the questionnaire is not validated and adapted to the romanian population so that its psychometric properties remain unchanged. Another limitation that this study refers to not taking into consideration some variables such as: personality characteristics of the students, the educational level of the parents, etc.

A research direction might be the parents' involvement in the interventional program. The parents' involvement in the children' learning process is the key aspect for the raising of autonomous motivation, respectively of the self-effectiveness level of the student which leads to satisfactory school performances (Furrer & Skinner, 2003; Grolnik, Friendly & Bellas, 2009; Cheung & Pomerantz, 2012).

Another research direction might be the investigation of the parental style influences over the students' motivational level during the learning process. Reading the specialized literature, some studies (Hafer-Bry, 2004; Turner, Chandler & Heffer, 2009) have demonstrated that, there is a strong connection between the parenting styles, motivation and the self-knowledge of students.

Authors note:

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A short critical analysis of curricular paradigms involved in teaching the mother tongue

Horia Corcheş & Mușata Bocoș

A short critical analysis of curricular paradigms involved in teaching the mother tongue

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Abstract

Keywords:
competences, curricular paradigm, cultural or the historical model, the linguistic or aesthetic model, the social model, the model of the orientation towards the reader or the personal development

Over the past decades, the pedagogy of competences has become the main direction of research and design of the didactic approach in the European space. This direction places the entirety of the educational process under the sign of the direct connection between school, education and life experience. Against this background, Sigmund Ongstad, in his work, Research on *Mother Tongue Education in a Comparative International Perspective*, puts into circulation and explains the concept of curricular paradigm, which is taken up in the didactics of mother tongue in our country in order to delimit the historical stages of certain specific curricular visions, as well as their characteristics. Thus, it is possible to speak of four paradigms or curricular models: the cultural or historical model, the linguistic or aesthetic model, the social model and the model of the orientation towards the reader or the personal development. The cultural model aims at forming the national consciousness, the feeling of patriotism; it is centred on the teacher, it favours the dogmatic and the socratic methods, the teacher being the expert in transmitting information ex-chatedra. The social model favors the same methods: it is centred on the teacher and the student, but it aims at subsuming the literature of ideological goals. The aesthetic or linguistic model, also centred on the teacher and student, regards literature as an autonomous universe; within this model, the contents of learning are the structuralist instruments for deconstructing the text. The personal development model shifts the focus to the student, favours the active-participative methods and privileges the reflection on the set of values proposed by the world of text, but also the interpretation of the relationship between the world represented by the text and the world of the reader.

Zusammenfasung

Schlüsselworte:
Kompetenz, Lehrplanparadigma, kulturelles Modell, ästhetisches Modell, soziales Modell, as Modell der Orientierung am Leser

In den letzten Jahrzehnten ist die Pädagogik der Kompetenzen zur Hauptrichtung der Forschung und Gestaltung des didaktischen Ansatzes im europäischen Raum geworden. Diese Ausrichtung stellt den gesamten Bildungsprozess in den direkten Zusammenhang zwischen Schule, Bildung und Lebenserfahrung. Vor diesem Hintergrund bringt Sigmund Ongstad in seiner Arbeit "Forschung zur Muttersprachenbildung in einer vergleichenden internationalen Perspektive" das Konzept des Lehrplanparadigmas in Umlauf, das in der Didaktik der Muttersprache in unserem Land aufgegriffen wird, um die historischen Stadien bestimmter curricularer Visionen, sowie deren Eigenschaften abzugrenzen. Man kann also von vier Paradigmen oder Lehrplänen sprechen: dem kulturellen oder historischen Modell, dem sprachlichen oder ästhetischen Modell, dem sozialen Modell und dem Modell der Orientierung am Leser oder der persönlichen Entwicklung. Das kulturelle Modell zielt darauf ab, das nationale Bewusstsein und das Gefühl des Patriotismus zu formen. Es konzentriert sich auf den Lehrer, es bevorzugt die dogmatischen und die sokratischen Methoden, wobei der Lehrer der Experte für die Übermittlung von Informationen ex-Chatedra ist. Das Sozialmodell bevorzugt die gleichen Methoden: es konzentriert sich auf den Lehrer und den Schüler, zielt jedoch darauf ab, die Literatur der ideologischen Ziele zu subsumieren. Das ästhetische oder sprachliche Modell, bei dem auch Lehrer und Schüler im Mittelpunkt stehen, betrachtet die Literatur als ein autonomes Universum. Innerhalb dieses Modells sind die Lerninhalte die strukturalistischen Instrumente zur Dekonstruktion des Textes. Das Persönlichkeitsentwicklungsmodell verlagert den Fokus auf den Schüler, bevorzugt die aktiv-partizipativen Methoden und bevorzugt die Reflexion über die von der Textwelt vorgeschlagene Wertemenge, aber auch die Interpretation der Beziehung zwischen der durch den Text dargestellten Welt und die Welt des Lesers.

1. Introduction

Throughout recent decades, specialists in pedagogy have won new battlegrounds, whose evolution is, in its turn, progressive and systematic (Chiş, 2015). It can be easily noticed that there are two great pedagogical periods, generically seen as distinct: a traditional one, and a second, modern one. While traditional pedagogy focused on knowledge, memory, and assimilated content, being characterised by superficial learning, modern pedagogy has evolved to favour critical thinking, problem solving, development and anticipation, thus leading to in-

depth learning. New pedagogical paradigms propose a more specific definition of the concept, so that nowadays it is an ability-oriented type of pedagogy that we are referring to. This new pedagogy pays attention to both the nature and the content of the learning experience, to teacher-student relationships, as well as teacher-teacher and student-student relationships, understanding all of them in light of the direct connections between school, education and life experience (Bocoş & Jucan, 2019).

Along with the theoretical development of these directions in pedagogical research, a growing interest has also been registered in establishing certain curricular patterns that could help circumscribe the specificity of such views on diachronic education in particular.

Coined by Sigmund Ongstad and detailed in his *Research on Mother Tongue Education in a Comparative International Perspective* (Ongstad et al., 2007), the notion of the *curricular paradigm* circumscribes especially those methods that determine the dominant teaching concept and the adjacent alternative concepts, as well as the evolution of the educational rhetoric regarding the mother tongue.

International Mother tongue Education Network (IMEN) was born out of the desire to compare modern research paths in the field of mother tongue learning, aiming at understanding various cultures' effort to assimilate the standard language in different countries (Ongstad et al., 2007). The aforementioned text, published in 2007, summarises the main theoretical principles and the methodological progress which served as the foundation of IMEN research during recent decades and which now broaden the scope of qualitative, comparative research in the field of mother tongue learning.

Initial conclusions have confirmed that the analytical role of the curricular paradigm can be easily highlighted amongst theorists, pedagogy and didactics specialists, whose perspectives on learning the mother tongue are rather homogeneous. It is, however, more difficult to prove the applicability of the same concept in other areas of mother tongue teaching, such as school curricula, textbooks, didactic auxiliary books and teaching per se, where theoretical concepts become dissipated, more and more diffuse, hindering one's ability to follow the thread of a coherent curricular vision. The more we near the level of actual teacher-student interaction, the more difficult it

becomes to identify the paradigmatic concepts shared by the members of educational groups (Ongstad et al., 2007).

While attempting no actual analysis of these comparative studies, we do highlight their importance as a general intellectual context contributing to the appearance of concepts such as *the curricular paradigm* or *the curricular model*, which were later included in autochthonous research and helped configure the dominant specificity of teaching in various periods of time, observed diachronically until today.

2. Curricular paradigms and their diachronic evolution

In the 19th and 20th centuries, European schools managed to selectively exploit the formative purpose of reading and its potential for diversity, due to dynamic educational policies, as well as to continuous advances in reception theories.

Paradigmatically, there are four distinct teaching patterns, each associated with an overarching and recurrent perspective. Out of the autochthonous literature in this field, Florentina Sâmihăian (Sâmihăian, 2014) and Alina Pamfil (Pamfil, 2016) have explained these patterns; their theories are set apart through minor terminological differences.

Thus, while Florentina Sâmihăian draws a clear distinction between *the cultural or historical model, the linguistic model, the social model* and *the personal development model*, Alina Pamfil describes *the cultural model, the aesthetic model, the social model* and the same *personal development model*. Beyond any terminological technicalities, both authors operate with the same curricular paradigms, arranging them in a diachronic order whose pattern sequence is determined by the educational objectives of every specific historical moment.

In the Romanian educational sphere, these four paradigms have had a precise chronology: the cultural model was implemented in the second half of the 19th century and in the first half of the 20th century; the aesthetic model in the 80s and the personal development model in the last decade, with an accentuated focus on its formative side within the last three years, as new school curricula for middle school were approved and established.

The cultural model is the oldest one, based on the philosophy of the Enlightenment and aiming at one's knowledge of the national culture and of the national cultural space. Simultaneously, it is meant to enhance patriotism and national pride. The appearance of this model can be justified in relation to the birth of the national modern state, which involved the development of a national conscience and could use literature as a prime instrument. Obviously, the model relies on classical values such as *good*, *truth* and *beauty* and on a literary canon able to vouch for them. Therefore, canonical literary works must propose valid perspectives on perception (truth), must observe ethical norms (good) and must be representative for literature in general, through their expressive dimension (beauty) (Sâmihăian, 2014).

From the point of view of taught contents, the cultural model implies studying the complete works of representative authors, both their biography and bibliography, and their artistic universe; the process includes the writers' localisation in the dynamics of literary history and the analysis of symptomatic texts (Pamfil, 2016). In terms of didactic methodology, the teacher represents the centre of the educational process and favours dogmatic and Socratic methods, as an expert conveying information ex cathedra (Pamfil, 2016). Student assessment involves reproducing the received information, as performance indicators measure accuracy above anything else.

It must be said that, although the cultural model was born in and dominated the teaching practice of the second half of the 19th century and the first half of the 20th century, it did not disappear completely in the subsequent decades. In fact, it can still be found in our contemporary school system, more or less integrated in other models.

The partial abandonment of the cultural model was caused by the implementation of mass educational programs, which enhanced the diversity of the student body – with students from different social backgrounds – and made an elitist approach impracticable. Another factor was the shift in politics, as the 50s and 60s were ruled exclusively through a socialist regime.

As for the **social model**, it could be argued that the Romanian phenomenon proceeded the correspondent European one, as the autochthonous social paradigm was imposed in the 50s and 60s, while Europe was generally acquainted to it only in the 70s – and through other means, of course. The main objective of the model is the assimilation of certain images regarding the social structure of reality (Pamfil, 2016). However, while the European version prioritised the social conscience of its students, the Romanian model was submitted to a strong socialist ideology. Within the social model, literature became a discourse on society and social phenomena, decentralising the canon and replacing representative writers with those serving ideology. Therefore, a consequence of this paradigm in the Romanian educational system was the shaping of minds according to political and ideological objectives, associated with such concepts as *the new man*, *the proletariat's fight, the communist society, bourgeoise decadence* etc. Contextualisation dealt mostly with the social dimension and even classical texts were read through the prism of contemporary social issues. As opposed to its European brand, whose theoretical discourse focused on socio-criticism, feminism or multiculturalism, the Romanian social model only served the political ideology of the moment.

When it comes to pedagogical practice itself, this curricular model focuses on the student and on the teacher, who could guide a process of selective reading, in order to locate various ideological, political and social suggestions, especially the non-explicit ones. The dogmatic and Socratic methods are still favoured, but the student is encouraged to engage with the world of the text. Ideally, assessment should not target the informational dimension, but rather communication skills, argumentative abilities and eloquence in conveying ideas. However, because of political deviations, the Romanian educational system actually evaluated the reproduction of an ideological – and often cliché-ridden – discourse.

The third model – the **aesthetic** one (in Pamfil's terminology) or the **linguistic** one (in Sâmihăian's terminology) – appeared more explicitly in the Romanian teaching system of the 70s, alongside the social model. Generally speaking, this model is no longer centred on a sum of literary universes, belonging to a sequence of authors in literary history, but considers the text to be an autonomous universe, based on construction mechanisms to be deciphered only with the aid of specialised instruments. This is why the model is sometimes called an analytical one and is seen as different from the cultural – or synthetic – one. The objective is the development of aesthetic taste or even the development of an aesthetic conscience (Sâmihăian, 2014). The central canon is not abandoned, but representative fragments will be chosen

for studying, as learning is mostly oriented towards proper analysis (Pamfil, 2016). Although it would appear that aesthetic judgements can be easily formulated, deciding on the value of certain texts, inherent limitations endure, as the structuralist, hermeneutical and stylistically normative set of instruments remains the main theoretical discourse of the paradigm.

The advantage in comparison to the cultural model derives from the increased freedom of the student (the beneficiary of the learning process) inasmuch as his work is no longer reproductive and his contact with the text is direct. On the other hand, as Tzvetan Todorov (Todorov, 2011) argues, there is a risk of generalised technical and substance-void analysis, where the instrument becomes a formula, a cliché, and the student misses the profound meaning of the text (Sâmihăian, 2014).

From the point of view of didactic practice, this curricular model is centred on the teacher and on the student, with the former still being the expert in charge. Assessment tests the assimilation of a certain set of conceptual and analytical tools.

The curricular model of personal development (Pamfil, 2016) – **the reader-oriented model** (Sâmihăian, 2014) – only appeared in Europe in the last decade and was included almost simultaneously in the Romanian educational system. Its major goal is the complex personal development of students, highlighting the importance of global textual meaning and interpretation. Literature is thus seen as a discourse on humanity, on the human condition and on human nature (Pamfil, 2016). Therefore, the model prioritises reflection on the values represented in a work of literature, on inter-human relations, character evolution and the relationship between the fictional world and the reader's world. The educational process happens through exploring various fields of knowledge, through individual survey and reflection or through experimental discovery methods, leading to in-depth, meaningful learning (Chiş, 2005). The paradigm of personal development is based on the two main functions of the teacher: first, they will try to acquaint themselves with the students (documenting themselves on the students' interests, learning difficulties, literary preferences etc.); at the same time, they will attempt to help each student in their individual development process, charting their performance, providing feedback and constant support.

The specificity of this paradigm in relation to Romanian literature and language is granted by the accent placed on student benefits in terms of personal, social, cultural and academic development: students can reach a point of self-knowledge and can build a set of personal values based on their thoughts on literature and on their own learning methods; also, they can practice self-expression through writing and speaking, conveying not just ideas, but also emotions; performance in the field of communication can enhance self-worth and self-confidence; the student can gain a better understanding of other people and can more easily establish relationships with them within activities involving interaction and cooperation (discussions about the text, sharing opinions; role play, with the purpose of practicing oral communication strategies; choosing the right lexical and grammatical elements depending on the interlocutor; collective writing); students can better comprehend their own world, using both literary and non-literary materials (while reading the texts, they will reflect on personal experiences, practicing critical thinking); they can develop their creative potential, participating in activities belonging to different related disciplines; they will utilise language-related content in order to communicate clearly, correctly and in an adequate way in the given context, so that their intentions can have an impact on the listener; they can finally achieve better results in all disciplines, granted that they can manage oral and written communication techniques.

To summarise, this paradigm turns reading into a form of self-knowledge, which allows students to develop their awareness of the cognitive-emotional effects of the text and to experience the intellectual pleasure ensured by literature.

In terms of didactic methodology, this curricular model is centred on the student, favouring active-participatory methods. The teacher's role is to facilitate and to guide, and assessment – organised with more difficulty than in the case of other models – attempts to evaluate communication skills, argumentative abilities and eloquence.

3. Conclusions

Thus, from the point of view of educational science, the cultural model involves focusing on the teacher and using the dogmatic or Socratic methods. In addition, the social model is centred on the teacher and on the student, but makes use of the same methods, while the aesthetic

model proposes activities centred on both the teacher and the student as well as active teaching methods (Bocoș, 2013). This transition started with the dominance of the dogmatic method, continued with stages favouring Socratic methods and ended with the supremacy of active methods. In reality, the discipline's evolution is not quite linear, and boundaries between various stages are actually less clear. These models have existed synchronically all throughout recent history. The vast majority of school curricula are heterogeneous, announcing both future patterns and the continuation of previous curricular trends, while pedagogical practice allows the intersection of methods and theoretical elements belonging to all four curricular models.

Authors note:

The authors have equal contributions to this article.

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New Perspectives in the Professional Competence Formation of the Primary Education Teacher

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New Perspectives in the Professional Competence Formation of the Primary Education Teacher

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Abstract

Keywords:
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Changes in contemporary society demand modifications, adaptations in education. Therefore, by implication, the teaching profession needs reconfigurations to meet the demands of any modern society. The teachers are the ones preparing the next generations of students for efficient professional integration and complex personal development; hence the teaching profession must be in a permanent dynamic. This profession has a certain specificity and a very strong social impact, which is why it requires a number of different specific competences. Due to the complexity of the teaching profession, it was very difficult to structure and summarize the competences that define this field of activity. Regardless of the age level they are addressed to, the professional competences of the teaching staff must be well trained and developed. The social and professional evolution of each student depends on the quality of the educational action. The diversification of the areas of competence in the didactic profession is a must in order to reach a high-quality level in the didactic activity. In this study, areas of competence from the perspective of professionalization of the professional competence of the teacher, but also recent studies that add new skills to this professional field, required by the current society, shall be presented. Thus, primary education teachers, and not only, must be under continuous training.

Zusammenfasung

Schlüsselworte:
fachliche Kompetenz des Lehrers, Kompetenzbereiche, professionelles Training

Veränderungen in der heutigen Gesellschaft erfordern Veränderungen, Anpassungen im Erziehungswesen. Das bedeutet dass der Lehrerberuf neu konfiguriert werden muss, um den Anforderungen einer modernen Gesellschaft gerecht zu werden. Die Lehrer sind diejenigen die die nächsten Generationen von Schülern auf eine effiziente berufliche Integration und eine komplexe persönliche Entwicklung vorbereiten. Daher muss der Lehrerberuf in einer permanenten Dynamik sein. Dieser Beruf hat eine gewisse Besonderheit und einen sehr starken Einfluss auf sozialer Ebene, weshalb er eine Reihe verschiedener spezifischer Kompetenzen erfordert. Aufgrund der Komplexität des Lehrerberufs war es sehr schwierig, die Kompetenzen, die diesen Tätigkeitsbreich definieren, zu strukturieren und zusammenzufassen. Unabhängig von der Altersstufe der unterrichteten Schüler müssen die beruflichen Kompetenzen der Lehrkräfte gut ausgebildet und weiterentwickelt werden. Von der Qualität der Bildungsmaßnahmen hängt die soziale und berufliche Entwicklung eines jeden Schülers ab. Um ein hohes Qualitätsniveau in der didaktischen Tätigkeit zu erreichen, ist die Diversifizierung der Kompetenzbereiche im didaktischen Beruf unabdingbar. In der vorliegenden Studie werden Kompetenzbereiche aus der Perspektive der Professionalisierung der beruflichen Kompetenz des Lehrers vorgestellt, und ebenfalls neuere Studien, die diesem Berufsfeld neue Kompetenzen verleihen, die von der heutigen Gesellschaft geforderten sind. Daher müssen die Grundschullehrer und Lehrer allgemein ständig weitergebildet werden.

1. Conceptual delimitations

Being a teacher is an expression that designates more than the carrying out of an activity, which is why it is difficult to define precisely the area of competence, the limits and the borders of this profession. The influence of a teacher's personality over the educated extends beyond the classes or the schooling period. This is precisely why is intended to specify very accurately the roles of a teacher. It is often considered that in order to be a good teacher, is sufficient to master the scientific field or to love children, to be pedagogically talented or possess didactic skills, if the reference point is the definition of

the teaching profession from the perspective of art. All the aspects listed are important in the delimitation of the competence of the teacher, but they are not sufficient when assessed separately. Their combination is essential in achieving any quality instructional-educational activity. In order to professionalize the didactic activity, it is necessary to establish the coordinates that guide, delimit or orient the field of activity, of competence of the teacher. This is important from several perspectives: that of the teacher to know the expectations of the society from the teaching profession and the personality type of the teacher; from the perspective of the educational institutions that prepare the future teachers, ensuring the

basic training, in order to carry out a quality training, in line with the areas of competence required by the future activity; and from the perspective of the direct and indirect beneficiaries of the education - students, parents - they shall know the areas of competence of this profession.

2. National contributions

In the specialized works, the delimitation of the professional competence of the teacher is achieved according to different criteria: some emphasize, in the description of the profession, on knowledge, skills, abilities from the perspective of the didactic mastery, other papers specify exactly the areas in which a teacher should perform. There are two guidelines in defining the teaching profession: is the teaching profession an art or a science? It must be both art and science as it is founded on scientific basis, but the successful practice of this profession involves the skillful combination of the scientific elements with personality traits to shape the profile of a successful teacher.

> **Emil Păun**

Competence is seen as a matrix in which the elements function in full, at the same time, in a prototype situation (Păun, 2017, p. 177). The competence, viewed from this perspective, of a matrix, is standardized through assessment scales that describe the training profile of the teachers. Competence is sometimes interpreted as excellence in a field, thus differentiating a person who shows high competence in a certain area from another who does not possess that competence. Starting from these theoretical arguments, the mentioned paper presents the specific elements of the didactic professional competence: competences in the field of specialty, methodological competences, communication skills, competences of students assessment, competences in the field of knowledge, counseling and guidance of students, skills in management of the class, skills in the field of institutional development, career management skills (Păun, 2017).

> **Dan Potolea and Steliana Toma**

The delimitation and grouping of the areas of competence in the teaching profession can be found in the document presented at the Education Congress, prepared by Dan Potolea and Steliana Toma (Bucharest, 2013). Thus, three major categories of competences for the teaching profession are mentioned: *specialized skills,*

professional skills, transversal skills, the composition of each field being presented explicitly.

Knowledge:

1. Knowledge, understanding of the basic concepts, theories and methods of the field and area of specialization; their proper use in professional communication;

2. Make use of basic knowledge to explain and interpret various types of concepts, situations, processes, projects, etc. associated with the field.

Skills:

3. Apply basic principles and methods for solving well-defined problem/situations, typical for the field, under qualified assistance;

4. Appropriate use of standard criteria and methods of assessment to assess the quality, merits and limits of processes, programs, projects, concepts, methods and theories;

5. Develop professional projects with the use of established principles and methods in the field.

Professional skills refer to: the design of the didactic activity, the management and monitoring of the learning process, the assessment of the educational activities, the use of digital technologies, the knowledge, counseling and differentiated treatment of the students and the management of the classroom.

Transversal skills include: institutional development of school and school-community partnership, career management and personal development, applied educational research.

3. European and international studies

At European level, competences are presented analytically, establishing professional standards for each competence (European Commission, 2013 *https://ec.europa.eu/assets/eac/education/policy/school/ doc/teachercomp_en.pdf)*. Competence includes: knowledge, skills and attitudes. The professional competences of the teacher are presented comparatively, aiming specific aspects of countries from the EU area. Such an approach is achieved in order to harmonize the initial training of teachers to be recognized in the European community. "The knowledge, skills and attitudes of teachers, as well as their quality in the field of school management, are the most important factors in

obtaining high quality educational results" (http://ec.europa.eu/education/policy/school/teaching-professions_en).

Teachers need to be very well trained in their area of expertise, possess the pedagogical skills necessary to pass on the specialized knowledge to students, to be able to teach in heterogeneous classes, effectively use ICT and help students build their transversal skills. For example, for the basic training carried out in Romania, the description is as follows: "The teacher for primary education/the schoolmaster teaches almost all the subjects in the curriculum to the students in the age group 6-10 years. They organize the classroom and learning resources and encourage the framework for positive learning. The teacher plans, prepares and teaches lessons that feed the needs of the whole class. Develops assessment tools, evaluates school results and records students' progress. He/ she works with parents to maximize their involvement and resource development in school" (http://ec.europa.eu/growth/toolsdatabases/regprof/index.cfm?action=regprof&id_regprof=30654).

The competences of any person can be defined according to the knowledge, skills and behavior of that person. In order to understand the competences required of a teacher, the workplace of a teacher must first be defined. The duty of a teacher is closely linked to the nature of the class, the structure and characteristics of the learner group. Today's classes require teachers to "prepare virtually all students for higher order thinking and performance skills" (Darling-Hammond, 2006, p. 300), this being pursued, sometimes, only for a few students.

Researchers and practitioners are becoming increasingly aware that the needs of 21st century learner groups and, therefore, the requirements for both students and teachers are undergoing significant changes. Today's teachers need to develop a holistic range of skills: for teaching and learning, administration and management, as well as knowledge in various fields: about themselves and learners, about community and pedagogy, among many others. What are the roles of the teacher in the 21st century? What are the skills that teachers must possess to fulfill these roles? A team of teachers from the National Institute of Education in Singapore (http://singteach.nie.edu.sg/issue23-teachered/) listed some of the roles that any member of the teaching staff must perform. Some of the roles identified are:

- Care for the development of the child as a whole;
- Providing quality learning activities;
- Collaboration with other persons specialized in education, but also in other fields;
- Developing a strong set of personal values.

The research mentioned specifies the set of basic competences that any teacher should possess in order to fulfill these roles. These competences have been classified into three dimensions of performance (http://singteach.nie.edu.sg/issue23-teachered/):

- Professional practice;
- Leadership and management;
- Personal effectiveness.

3.1. Professional practice

In carrying out the didactic activity, any competent teacher uses every opportunity to encourage learning, always assuming that all students have the ability to learn. Learning is not just limited to the classroom. To this end, the teacher must take every opportunity to improve his/her professional practice and to provide quality learning, in non-formal or even informal education.

3.2. Leadership and management

Any competent teacher wins the hearts and minds of students, being a leader of the class of students. Such a teacher is aware of the need for professional evolution and development by collaborating with others, including the students' parents, and is actively seeking professional training opportunities both within and outside the school.

3.3. Personal efficiency

Any good teacher is aware of the importance of personal development. From this perspective, the teacher maintains high standards of personal and professional integrity when he/ she fulfills his/ her duties and responsibilities.

4. New perspectives in the professional competence of the member of the teaching staff

In a period of major political, social, demographic changes at European and global level, education is adapting and gearing to meet the demands of today's society. New perspectives are therefore opening in the training of future primary education teachers.

4.1. Global competence

Education for multiculturalism and diversity viewed from the perspective of interdisciplinary education, of an integrated curriculum, implies the extension and adaptation of professional competences. This is how one can speak of global competence (http://www.nafsa.org/).

How does *global competence* look like in a teacher? Some coordinates are presented below (Soppelsa, Manise, 2015):

1. Understanding one's own cultural identity and its influence on the classroom practice;

2. Knowing and integrating global dimensions within the subjects one teaches;

3. Engaging students in learning about the world and in exploring their place in it worldwide;

4. Using real-life global examples, materials, and resources when considering local, national, and human issues;

5. Valuing the input of culturally and linguistically diverse learners, families, and colleagues, and modeling cultural sensitivity;

6. Creating environments that encourage positive cross-cultural interaction;

7. Modeling social responsibility in local and global contexts;

8. Helping learners find appropriate actions to improve local and global conditions;

9. Assessing learners' global competence and providing growth opportunities;

10. Advocating for global education and social responsibility.

Together, these and related elements led to the development of this definition of global competence for teachers. According to NAFSA: Association of International Educators: "Global competence in teachers is a set of essential knowledge, critical dispositions, and performances that help foster development of learners' global competence. A globally competent teacher has knowledge of the world, critical global issues, their local impact, and the cultural backgrounds of learners, manifests intercultural sensitivity and acceptance of difference, incorporates this knowledge and sensitivity into classroom practice, and develops the skills to foster these dispositions, knowledge, and performances in learners. The teacher shapes socially responsible action and creates opportunities for learners to engage in socially responsible action" (© *NAFSA: Association of International Educators, 2015* http://blogs.edweek.org/edweek/global_learning/2015/08/the_top_10_characteristics_of_globally_competent_teachers.html*)*.

Global competence for teachers is no longer for just an elite few, but rather is an essential element of preparation for all teachers. It is necessary to form this competence whilst preparing tomorrow's teachers.

4.2. The ability to adapt to new

In the modern, digital age, a teacher needs to be flexible and adaptable. Modern teachers know how to cope with challenges without fear. The digital age can be called *the era of change*. New technologies and educational strategies are introduced every minute. Each student learns in a different way and at a different pace. The guidelines and expectations in education are constantly updated and revised. The adaptation to the new implies both the introduction of new technologies in learning and the knowledge and application of new learning strategies.

4.2.1. Flipped classroom is a combined learning strategy, applied in order to improve the involvement of students in learning and their results. This concept can be assimilated with pedagogies such as: active learning, peer-to-peer training, case-based or problem-based learning, or any combination of learning strategy that asks students to prepare the learning/topic before meeting and to engage with colleagues in learning activities (*https://sydney.edu.au/education-portfolio/ei/news/pdfs/flipped-classrooms.pdf)*. The basis of this strategy is the use of digital educational resources, especially of the Internet, and the teacher has the role of coordinator of the learning activity, thus exceeding the traditional model of the teacher as sole treasurer of knowledge (Jenkins, 2017).

4.2.2. Agile learning is a learning strategy based on the dynamic planning of the learner's activities, on the ability to make decisions, to raise awareness of the needs and to prioritize the learning activities. Many learning settings require dynamic (agile) planning for both the teacher and his/ her students (Briggs, 2014).

4.2.3. Visible learning is an integrating concept that includes effective teaching and learning strategies. When teaching and learning are visible, "there is a high probability that students will achieve high levels of learning success" (Hattie, 2014). The teacher has the role

of an expert who "masters a series of training strategies to build the surface and depth knowledge of the students and to understand the meaning of the content and understanding" (ibidem). The teacher must know when to withdraw: "when the learning takes place and when the learner's progresses towards the desired educational performance" (ibid.).

4.2.4. A primary school teacher should help students cope with change, i.e. to *help children adapt*. In a study of the University of Sydney on the effects of adaptability on the evolution of young people, it was found that the effects of adaptability are very strong, and adaptability is a factor with a high impact on academic and non-academic outcomes (Martin, 2013). In order to help students to adapt, for the purpose of increased school performance and complex and comprehensive personal development, the teacher himself/ herself must prove this ability: to cope with change.

4.3. Work skills with students with special needs

The school and professional integration of students with special needs are important requirements of the contemporary society. Starting from this goal, the competences of the teacher for primary education need to be rethought and diversified to meet the need for integrated education and school inclusion. Inclusive education aims at developing positive interpersonal relationships, adapting school curricula according to the needs of students with special educational needs (SEN), diversifying educational actions and strategies for students with SEN, ensuring equal access to education, specific learning situations and activities (Gherguţ, 2016). Inclusive education refers to all students, to educational and developmental needs, and starts from the idea that in different development periods, every child has special needs. Thus, the child is at the core of attention as a complete universe and as a partner in education (Vrăşmaş, 2005). Students with ADHD, with autism spectrum disorders, sensory or motor impairments, learning difficulties are often included in mainstream education. Thus, the primary education teacher must have specific skills for this type of education. These competences could be described by: knowing the specificity of the problem of the student's/ students' with special needs within the student group, adapting the teaching strategies within the teaching activity to the learning needs of the students, fostering an environment conducive to the relationship between the students of the classroom and between

parents of children in the classroom (Ghergut, 2016), cooperation with the itinerant teacher, the school psychologist and the student's family for curricular adaptation, differentiated evaluation, progress monitoring and, possibly, reorganization of the teaching strategy. Thus, the primary education teacher must capitalize on the positive aspects of the students' personality in order to help, coordinate and guide them in an efficient learning process.

4.4. ICT skills for teaching, new technologies at the workplace

ICT competences can be included in the category of transversal didactic competences, but in view of the evolution of new technologies and their use on a larger scale in the educational act, this category of competences is included in the category of professional competences. At European level, the 2012 Euridice report states that almost all countries have a national strategy for digital competence formation in students. This implies ensuring a high level of digital skills among teachers, implicitly among primary education teachers (*Competenţa digitală, o abilitate esenţială pentru profesori şi elevi în secolul XXI*, 2017, https://www.schooleducationgateway.eu/ro/pub/resources/tutorials/digital-competence-the-vital-.html).

The inclusion of ICT in the teaching-learning activity has relevant training strengths: students are actively learning, learning using the computer or tablet is a learning based on exploration, the information resources are at hand, being accessible, and this increases the motivation of learning and fosters deep learning. The emphasis is on learning as a process, not just on the product, thus managing to train students certain skills of: communication, collaboration, involvement, critical thinking (Wojcicki, *Education Talks*). These skills are needed in any field of activity, so it is important to train students starting at the elementary level, using technology in the teaching-learning activity facilitating this aspect. As stated, the training of digital skills should start from an early age, but the teachers are the ones who decide on the optimal ways in which this competence shall be formed, the type of technology used as well as the time allocated to digital activities. For students to gain and to develop digital skills, an important condition is to ensure a high level of digital competence among teachers.

4.5. Skills for tailored learning strategies and building interdisciplinary skills in students

Approaching learning from new perspectives, in order to meet the new demands of the modern learner and, implicitly, of the society, demands for a new category of skills: from being able to design and use differentiated teaching-learning strategies to individualization, as they will help students to establish an independent learning style as a starting point in the formation of the long-life learning competence. Students enter the training field with a different set of information, with different perspectives, expectations and needs, with their own life experience, with a specific way of thinking and learning ability (Pânişoară, 2015). In this situation, the solution for optimal learning outcomes is differentiated instruction, the teacher's teaching style being modeled on what a student can effectively achieve. For this purpose, the teacher must acquire in the initial and continuous training, skills for individualized learning strategies.

An integrated curriculum, based on interdisciplinarity, aims to train interdisciplinary skills in learners by: transposing new information into concrete life situations, making connections between information acquired in different subjects, building a holistic cognitive system, critical thinking, divergent, reflective thinking, and this task rests with the teacher.

5. Conclusions

➢ The member of the primary education teaching staff must develop competences in specific teaching strategies that lead to the formation of interdisciplinary skills in students. Consequently, the integrated design of the contents, the design, organization and achievement of the learning activities in an interdisciplinary way, the fostering of the learning strategies based on the project, on the learning by discovery or the learning based on the solution of problems are some areas of competence for the teaching staff, that must be valorized in school practice to lead to the formation of interdisciplinary skills in primary school students.

➢ The primary education teacher's ability to adapt to new requires time and availability to assimilate the innovative aspects of society and, implicitly, of education.

➢ Teachers are recommended, but also have the concurrent obligation to update their information in the professional field, to be up to date with the news in the field. Moreover, their priority objective should be continuous personal growth and professional excellence acquired through life-long learning.

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Curriculum for early education in Romania - critical analysis

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Curriculum for early education in Romania - critical analysis

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Abstract	
Keywords: curriculum; early education; outdoor education	The curriculum for early education represents the foundation for the activities performed in nurseries and kindergartens in Romania. This document systematically addresses the field of early education, including both preschool and ante-preschool education. The goals of early education are aimed at the five areas of child development, encouraging the overall development of the child and taking into account the child's future competences. The game remains the fundamental activity of ante-preschoolers and pre-schoolers. Thus, the importance of free play is highlighted. The Curriculum for early education comprises the first mentions regarding outdoor activities. Although the concept of outdoor education is not defined, explained or exemplified, it is desirable that children face different climatic conditions and that they play diverse outdoor games.

Zusammenfasung	
Schlüsselworte: Lehrplan; Früherziehung; Outdoor-Bildung	Der Lehrplan für die Früherziehung ist die Grundlage für die Tätigkeit von Kinderkrippen und Kindergärten in Rumänien. Dieses Dokument befasst sich systematisch mit der frühkindlichen Erziehung, die sowohl die vorschulische als auch die kleinkinderliche Bildung einschließt. Die Ziele der frühkindlichen Erziehung konzentrieren sich auf die fünf Bereiche der kindlichen Entwicklung, fördern die Gesamtentwicklung des Kindes und berücksichtigen seine zukünftigen Kompetenzen. Das Spiel bleibt die Grundaktivität der Kleinkinder und Vorschulkinder, wobei die Bedeutung des freien Spiels hervorgehoben wird. Mit der Genehmigung des Curriculums für die frühkindliche Erziehung erscheinen die ersten Erwähnungen über Outdoor-Aktivitäten. Obwohl das Konzept der Outdoor-Bildung nicht definiert, erklärt oder veranschaulicht wird, ist es empfehlenswert, Kinder den klimatischen Bedingungen auszusetzen und Outdoor-Spiele zu spielen.

1. Introduction

The curriculum for early education (of children from birth to 6 years old) is the official document that underlies all the activity carried out in the preschool and ante-preschool education units in Romania starting with the 2019-2020 school year. If the previous curriculum referred only to preschool (Curriculum pentru învățământul preșcolar (3-6/7 ani), 2008), this new curriculum also includes the period previous to kindergarten, i.e. the nursery. One of the arguments underlying this document is precisely the need to treat early education as a system that includes both nursery and kindergarten education.

According to the Curriculum for early education, the aims mentioned in the document *The fundamental benchmarks in early learning and development (Repere fundamentale în învățarea și dezvoltarea timpurie a copilului de la naștere la 7 ani – RFIDT)* (Ionescu, Anghelescu & Boca, 2010) are the foundation of this curriculum. Both the curriculum and the RFIDT support the holistic development of the child, encouraging the development in all five areas of development:

- physical development, health and personal hygiene;
- socio-emotional development;
- cognitive development and knowledge of the world;
- development of language, communication and the premises of reading and writing;
- skills and attitudes in learning.

2. Outdoor education versus Curriculum for early education

The curriculum for early education is developed from the perspective of an activating, interactive and integrated pedagogy, centered on the child, offering a document focused on personalized educational approaches and on acquiring behaviors that would underpin the development of later skills, in accordance with the overall development of the preschooler.

In contrast to the Curriculum for preschool education (Curriculum pentru învăţământul preşcolar (3-6/7 ani), 2008), in the Curriculum for early education (Curriculum pentru Educaţia Timpurie, 2019) the concept of "outdoor activity" is mentioned, emphasizing the idea of changing the location of activities. The two mentions are listed in the *Methodology of applying the Education Plan for early education*, point 13: "For the games and activities chosen in other spaces than the usual space of the group (outdoor), special attention will be paid both to the organization and arrangement of the playground, as well as the safety offered to the children the respective space and the existing facilities. Also, depending on the space chosen for conducting outdoor activities, which may be outside the institution (park, grass, forest, meadow, farm, grandparents' house, etc.), due consideration will be given to the suitability of the game and the exploration to the conditions offered by it." (Curriculum pentru Educaţia Timpurie, 2019, p. 10). We find that, although no details are made regarding the definition of this concept, it is emphasized the importance of the proper arrangement of the outdoor space in order to ensure the safety of the children and to adapt the activities to the existing conditions.

In addition to the aforementioned specifications, the idea of the outdoors is mentioned. Thus, in the presentation of the *Methodology for applying the Education Plan for early education*, point 6, outdoor activities are highlighted as a thematic activity specific to preschool education: "The thematic activities - AT (preschool level) are: [...] and Outdoor activities (tools of achievement: walks, sand games, games and sports competitions, use of age-appropriate play equipment)" (Curriculum pentru Educaţia Timpurie, 2019, p. 9).

Point 25 in the *Methodology for applying the Education Plan for early education* highlights the possibility of carrying out the activity or the sequence of movement in the form of an outdoor walk, as well as the obligation of daily exposure of children to the natural environment, regardless of climate change: "In the daily program it is obligatory to have at least one activity or moment/ sequence of movement (movement game with text and song, physical education activity, refreshment time, sports competitions or routes, outdoor walks, etc.). At the same time, the teacher will consider exposing children to environmental factors, as a condition for maintaining the health and conditioning of the body and will take out children at least once a day, regardless of the season (clear and explicit mentions related to this aspect will be included in the Educational Contracts made with the parents)" (Curriculum pentru Educaţia Timpurie, 2019, p. 12).

We find the idea of outdoor activity when exemplifying behaviors in relation to the dimensions and areas of development. Thus, at the ante-preschool level, within the Physical development, personal health and hygiene field, at the dimension of development Coarse motility and fine motor skills in family life contexts, the behavior "1.2. Participate actively in games, dances, outdoor games, etc." (Curriculum pentru Educaţia Timpurie, 2019, p. 18) emphasizes the involvement of the ante-preschooler in the recreational activities in the open air. We find that active participation in outdoor activities of children is encouraged from the time of the nursery.

Also, in the presentation of the daily program of children in kindergartens (groups with normal, extended and weekly program) we find the idea of children participating in outdoor activities both in the stage of games and activities freely chosen, as well as during the phase of personal development activities (ADP), for the interval 11.30-12.30 - in the groups with normal program and 11.00-13.00 - in the groups with extended / weekly program: "Freely chosen games and activities (movement games, fun games, contests, theater shows, literary / musical auditions, outdoor activities, visits, etc.)", "Routines and transitions aimed at preparing children for freely chosen activities and, implicitly, playing games and recreational activities, outdoors individual and collective hygiene skills, order and discipline skills, self-service skills, motor skills, communication and cooperation skills, etc.)" (Curriculum pentru Educaţia Timpurie, 2019, pp. 30-31). For the extended/ weekly program, the time interval 16.00-17.30 is dedicated to the freely chosen games and activities, implicitly the outdoor activities.

We find that the references to the term "outdoor activity", although they exist, are few in number. We mention that a mere exposure of children in the kindergarten yard, for example, is not an outdoor activity. The meaning of this concept is much deeper, and planning, organizing and carrying out such an activity requires careful preparation, with precise goals. Unlike the previous curriculum (Curriculum pentru învăţământul preşcolar (3-6/7 ani), 2008), the new curriculum mentions the concept of "outdoor activity", but does not provide other details.

The natural environment is an inexhaustible source of training experiences. Although the curriculum provides for the exposure of children in the open air, the practice and experience of the chair purport the opposite, the children being in the yard during sunny and pleasant periods of time. Moreover, the stipulations of the curriculum make further references to the outdoor activities within the games and the freely chosen activities, the moments of movement, the routines or transitions, their integration in the activities on experiential domains or their focus on the experiential domains being absent.

3. Outdoor education and the Fundamental benchmarks regarding the early learning and development of the child between birth and 7 years (RFIDT)

Taking into account the fact that the design of this document took into account the Fundamental benchmarks regarding the early learning and development of the child between birth and 7 years (RFIDT), in the following, we will analyze how outdoor education is viewed in this last document. RFIDT operates with the same areas of development with which the Curriculum for early education operates, encouraging the overall development of the child from birth to 7 years of age. Each of these areas was detailed in the sub-domains of development; the latter have been materialized in a number of specific aspects, and from these the benchmarks have been extracted. We specify that the analysis will be performed only for the age range 3-7 years, a period that overlaps with the preschool education.

In the presentation of the *Physical development, health and personal hygiene field* is described the importance of outdoor movement as a basic element for personal health and hygiene: "Personal health and hygiene include body hygiene (bathing, dental hygiene, clothing), sleep, nutrition, outdoor movement." (The fundamental benchmarks regarding the early learning and development of the child between birth and 7 years, p. 19).

Within this area, in the sub-domain *Physical development,* the specific aspect of Coarse motility, for benchmark no. 1: "The child should be able to coordinate the large muscles of the body with a purpose of movement.", age level 61-84 months (5-7 years) it is specified, among others, the following supportive practice: "Give children permanently the opportunity to move outdoors."

For the same domain, sub-domain and specific aspect, in reference 2: "The child should be able to participate in various physical activities." The following support practices are mentioned: for 37-60 months (3-5 years) – "Offer to children at least 60 minutes of physical activity daily, indoors or outdoors."; for 61-84 months (5-7 years) – "Provide children with plenty of time every day for outdoor activities and movement and teach them new movements, submit them to new challenges. Exercise their speed, strength, precision."

Within the same domain and subdomain, the specific aspect Sensory-motor development, for benchmark no. 4: "The child should be able to demonstrate the use of the senses (sight, hearing, tactile sense, smell, etc.) in interacting with the environment to guide their movements.", age level 37-60 months (3-5 years), is noted as a supporting practice: "Provide the opportunity to use the play equipment in the outdoor play area".

Specifications of this kind are also found in the field of *Skills and attitudes in learning,* the subdomain Curiosity and interest, age level 37-60 months (3-5 years); for benchmark 1: "The child should be able to show curiosity and interest in experimenting and learning new things.": "He shows enthusiasm for travelling outdoors and in new places.", "Organize excursions into the neighbourhood or in the community, trips, visits to the zoo, botanical garden, museums, etc.".

Note that the concepts of "outdoor education" or "outdoor activity" do not appear in this document. We note that most mentions are found in the field of *Physical development, health and personal hygiene*, with the importance of outdoor movement/ activities being highlighted. The field *Capacities and attitudes* in *learning* emphasizes the idea of moving towards the natural environment, of giving preschoolers multiple opportunities to explore new outdoor spaces, but which does not refer to the activity of outdoor movement/ play, but to the research of locations that correspond to their knowledge needs.

We also find that in this document there are not too many details regarding outdoor activities, the existing ones focusing on physical activities or environmental knowledge.

4. Conclusions

It is necessary to clearly define the key concepts conveyed and to make official regulations that grant the appropriate status to outdoor education. Although according to its specificity, outdoor education focuses more on the Science and Psychomotor fields, we recommend that the proposal is sustained and that some outdoor activities that are carried out will be based on the other experiential areas too.

In the following, we present a SWOT analysis of the Curriculum for early education:

Table no. 1. SWOT analysis of the Curriculum for early education

Strengths	Weaknesses
- The curriculum for early education was built in accordance with the Romanian educational ideal, respecting the individual and age particularities of ante-preschoolers and preschoolers; - The curriculum for early education is focused on areas of development, supporting the overall development of the child; - The curriculum for early education is based on the principle of child-centered education; - The curriculum for early education operates with the concept of "outdoor activity"; - The curriculum for early education encourages the achievement of freely chosen games and activities, as well as outdoor personal development activities; - The curriculum for early education encourages partnership with family and community.	- The curriculum for early education does not explain the concepts "outdoor education", "outdoor activity"; - The outdoor activities proposed by the curriculum focus mainly on the freely chosen games and activities, the moments of movement or the elements of routine and transition, the outdoor activities within the activities on experiential domains being absent; - The curriculum for early education makes use to a very small extent of the resources of the environment, which could facilitate the instructional-educational process.
Opportunities	Threats
- the possibility of customizing the instructional-educational process, respecting the particularities of the preschoolers and valorizing their potential; - flexibility in choosing and approaching the contents specific to the experiential fields, as well as in their integration; - the opportunity to capitalize on the contents specific to all the experimental fields in the outdoor activities; - the possibility of carrying out outdoor activities in all categories of activities; - capitalizing on the creative potential of teachers.	- certain informational aspects that could be more easily understood by preschoolers through outdoor activities are held inside the group rooms; - the lack of capitalization of the formative valences of the outdoor activities in the preschool education; - preschoolers spend a relatively short period in the natural environment during the daily program; - the lack of a connection between preschoolers and the (natural) environment.

In our opinion, outdoor education has seen a slight growth when the new curriculum became operative. Although there are only a few references to the concept of "outdoor activity", it is encouraging that it exists. We believe that the existence of a support curriculum that would explain, detail and exemplify the content and specificity of outdoor education would be of real benefit to teachers.

Considering the flexibility given to the teacher both from the point of view of the contents, as well as the modalities of carrying out the activities, we consider that the natural environment can be considered as an optimal framework for the instructive-educational process. First of all, certain content is more suitable for being taught and learned outdoors. Secondly, the proposed learning tasks can be much more diversified, generating positive, varied and desirable learning experiences. Last but not least, the possibility to carry out activities outside the four walls of the classroom provides an opportunity for joy, increasing the degree of motivation and offering the opportunity for free manifestation of the child.

In conclusion, we consider that outdoor education should be given the appropriate status within the curriculum (not only in the case of the one for early education), being encouraged to carry it out within each category of learning: freely chosen activities, activities on experiential fields and personal development activities. In this way, we will achieve positive results at the level of preschoolers both in the short term (knowledge) and in the long term (skills, attitudes, behaviors, etc.).

Authors note:

The authors have equal contributions to this article.

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Methodological guidelines in the elaboration of the evaluation tests for the end of the fundamental acquisitions stage

Denisa Moldovan & Mușata Bocoș

Methodological guidelines in the elaboration of the evaluation tests for the end of the fundamental acquisitions stage

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Abstract	At the end of the fundamental acquisitions stage, respectively of the second grade, students from the Romanian education system go through an evaluation process of the general and specific school competences formed in the first years of school. In the first part of this paper we approach some aspects and theoretical perspectives associated with docimology. Thus, we build a schematic theoretical-applicative framework, which we promote in order to facilitate a global understanding of the didactic evaluation process in general and of the didactic evaluation at the level of the primary classes, in particular. At the same time, we approach didactic evaluation from the perspective of the current national curriculum and the relevant prospective and praxiological directions in the educational activity. We highlight the absolute need to emphasize the interdependence relationships between the didactic project phase and the evaluation process, in the context of a competence-centered curriculum. Subsequently, we present validity criteria, design stages and relevant sections of some original assessment tools, which have the potential to highlight the students' results in terms of competences.

Keywords:
methodology, National Evaluation, fundamental acquisitions stage, competence.

Zusammenfasung	Am Ende der grundlegenden Erwerbsphase bzw. der zweiten Klasse durchlaufen die Schüler des rumänischen Bildungssystems einen Bewertungsprozess der in den ersten Schuljahren gebildeten allgemeinen und spezifischen Schulkompetenzen. Im ersten Teil dieser Arbeit werden einige Aspekte und theoretische Sichten im Zusammenhang mit der Dozimologie erörtert. So bauen wir einen schematischen theoretisch-anwendungsbezogenen Rahmen auf, den wir fördern, um ein globales Verständnis des didaktischen Bewertungsprozesses im Allgemeinen und insbesondere der didaktischen Bewertung auf Ebene der Grundschulklassen zu ermöglichen. Gleichzeitig gehen wir die didaktische Evaluation aus der Perspektive des aktuellen nationalen Lehrplans und der relevanten zukünftigen und praxeologischen Richtungen in der pädagogischen Tätigkeit an. Wir unterstreichen die absolute Notwendigkeit, die Wechselbeziehungen zwischen der didaktischen Projektphase und dem Evaluierungsprozess im Kontext eines kompetenzzentrierten Lehrplans zu betonen. Anschließend werden Validitätskriterien, Entwurfsphasen und relevante Abschnitte der selbstentwickelten Bewertungsinstrumente vorgestellt, die das Potenzial haben, die Ergebnisse der Schüler in Bezug auf ihre Kompetenzen hervorzuheben.

Schlüsselworte:
Methodik, Kompetenzprüfung, grundlegende Erwerbsphase, Kompetenz

1. Introduction

The didactic evaluation is a complex process which involves permanent actions of measuring the value of the results of the education system and evaluating the conditions in which the educational activity is carried out. According to Bocoș & Jucan (2019) the evaluation represents a subsystem of the education process, through which its efficiency is measured and appreciated respectively the level of attainment of educational purposes. Properly applied from a docimological point of view, these approaches contribute to increasing teaching efficiency and to making decisions to improve and perfect the entire teaching-learning-evaluation process, thus fulfilling a regulatory role.

The stage of fundamental acquisitions ends with a series of evaluation activities. At the national level, certain standardized tests are administered for the disciplines: Mathematics and Romanian Language, with the reading and writing sections. We provide an inventory of methodological benchmarks that we have followed in the elaboration of evaluation tests intended to prepare students for the National Evaluation EN II. These original instruments are contained in a curricular auxiliary published by the author, in collaboration with other educational partners, and approved by the Romanian

Ministry of National Education. We intend to make known the methodological guidelines followed, to be used by all teachers for the elaboration of the assessment tools in the classroom. At a general level, our methodological course followed three main directions, which we will explain and exemplify during the present paper:

- the stages of designing the evaluation tests;
- the elaboration of the samples for the assessment of the reading-writing competence;
- the elaboration of the samples for the assessment of the mathematical competence.

2. Steps required to be followed in the elaboration of evaluation tests

2.1. Legal classification of the didactic evaluation process and elaboration of evaluation tests

First of all, the didactic evaluation and the elaboration of the evaluation instruments must have a legal basis. The Low of National Education in Romania (Legea educației naționale nr. 1/ 2011) stipulates in Chapter V. Evaluation of learning outcomes, Section I. General provisions regarding evaluation, the following articles to be observed and respected:

- Art.71. – (1) The purpose of evaluation is to guide and optimize learning.

- Art.72. – (1) The assessment is focused on competences, offers real feedback to the students and is the basis of the individual learning plans.

The elaboration of the evaluation tests implies an effort of complex comparison of the results of the instructive - educational activity on three distinct, but complementary levels. The creators of evaluation tools must anticipate to what extent these instruments will be able to evaluate:

- the quality, by comparing the results with the proposed educational purposes;
- the efficiency, by comparing the results with the resources that have been used;
- the progress, by comparing the present results with the previous results.

2.2. Elaboration of evaluation tests through permanent reporting to competency-focused curriculum

The didactic approach must consider the current curricular paradigm and start from a curricular design focused on competences. Complementary to the competence-centred teaching-learning process, also the assessment must be carried out in the most authentic and real conditions, connected with reality. The evaluation tests developed, both during and especially for the end of the stage of fundamental acquisitions, must highlight the results of the students in terms of competences.

2.3. Competence-focused didactic assessment

By their specificity, the school evaluation context should allow students to demonstrate the achievement of current performances and of the general and specific school competences targeted at national level. After the first three years of school, students are able to demonstrate a certain school competence as long as they are supported to develop and prove their readiness to:

- select and use resources;
- effectively organize their prior experience;
- properly use their past benefits.

2.4. Criteria for the elaboration of the evaluation tests

Both at the macro-educational level, for the National Evaluation, as well as at the micro-educational level, in the evaluation activity in the classroom, the creators of the evaluation instruments must ensure that those tools meet the following criteria simultaneously:

- validity;
- fidelity;
- objectivity;
- applicability;
- sensitivity.

We also insist that the evaluation tests developed should be rigorously checked and, before administering them, anticipate whether they:

- provide relevant information on learning outcomes;
- are in functional relation with the educational objectives to be evaluated;

- have the quality to achieve the purpose for which they were developed;
- integrate various types of items.

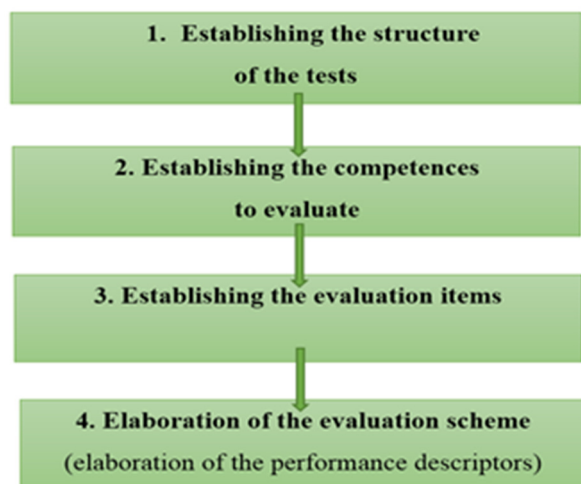### 2.5. The steps of designing the evaluation tests for the end of the fundamental acquisitions stage

Figure no. 1. The steps of designing the evaluation tests intended to prepare students for the National Evaluation EN II in Romania

3. Elaboration of the tests for the evaluation of the reading and writing competence

3.1. Developing the competence of reading and writing in primary school

The competence of communication in the native language (in our case, in the native language or in the language of the state) begins at the level of the first three years of school with the competence of reading and writing. This competence is a linguistic instrument necessary for all subsequent acquisitions. The reading-writing in Romanian ensures the use of the tools of intellectual work in order to train the students in the communication act, the interaction with their peers in real and diverse communication situations, anchoring the students in the realities of the time they are living. At national level, the main capacities targeted at the end of the second grade by the assessment for the fundamental competence of reading and writing are mentioned in *Programa școlară: Comunicare în limba română* (OMEN nr. 3418/ 19.03.2013):

- extracting essential information from a read text;
- correct and expressive reading, on its own rhythm, of a text;

- writing correct text from a lexical and a grammatical point of view;
- writing texts in compliance with the conventions of written language, correct page placement and legible writing.

3.2. Evaluating the competence of reading and writing in primary school

In the elaboration of the evaluation tests for students' EN II preparation, specific tasks were designed so as to allow them to practice and to demonstrate these capacities. We intended to help students to develop and test their competence of reading and writing by creating some contexts that facilitate the actions of decoding and using written texts and the reflection on the specific information for different fields of knowledge and/ or regarding the daily reality. In the particular case of developing reading competence one must consider some important factors regarding the texts included in the evaluation tests: the reading situation (personal, educational, occupational, public, scientific), the type of text, the structure of the text and the characteristics of the items (Pălășan, 2013).

3.2.1. The format of the texts chosen or created to be included in the reading evaluation tests

We have adapted and applied schematic representations proposed by Norel & Sâmihăian (2006, pp. 48-49):

Figure no. 2. The format of narrative texts/ sequences included in the evaluation tests intended to prepare students for the National Evaluation EN II in Romania
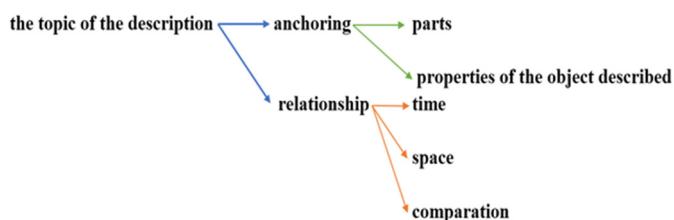

Figure no. 3. The format of descriptive texts/ sequences included in the evaluation tests intended to prepare students for the National Evaluation EN II in Romania

the argumentative sequence

thesis/ premise → arguments → conclusions

Figure no. 4. The format of argumentative texts/ sequences included in the evaluation tests intended to prepare students for the National Evaluation EN II in Romania
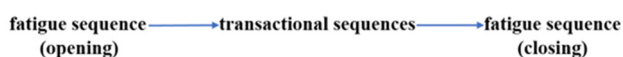
the explanatory sequence

specifying the theme → Why? → Because… / How? → Thus… → conclusion/ evaluation

Figure no. 5. The format of explanatory texts/ sequences included in the evaluation tests intended to prepare students for the National Evaluation EN II in Romania

the dialogue sequence

fatigue sequence (opening) → transactional sequences → fatigue sequence (closing)

Figure no. 6. The format of explanatory texts/ sequences included in the evaluation tests intended to prepare students for the National Evaluation EN II in Romania

3.2.2. Criteria for selecting the appropriate texts for the reading evaluation tests

In order to demonstrate, in the assessment situation, the skills acquired by the students, the texts for the reading tests must be selected so as to meet the following criteria:

- to cover as wide a range of types of texts as possible to stimulate students' interest in reading;
- to be authentic, of interest, possible to be encountered in everyday life;
- to constitute a significant and stand-alone cut-off of a maximum of 125 words, which will enable the text message to be understood and the formulated assessment to be met;
- to be included in the benchmarks specified by the national curriculum;
- to be texts *at first sight*, not studied in class.

3.2.3. The structure of the writing evaluation tests

The level of students' competence in writing is verified by applying specific tests consisting of two evaluation subjects/ items. The first one requires functional writing: writing a note, starting from a particular situation that has been described/ a hypothetical problematic situation. The

second subject requires imaginative writing: writing a short original text, starting from a concrete situation that has been described and based on support questions.

Example for the first subject/ item: *In two days you will go to a school camp with your classmates, but you have not yet packed your luggage. You forgot to buy a necessary cap and a lantern. Write a note to your mother to remind her of the camp and ask her to buy you the items you need. Check if you have complied with the requirement, that you have written the date and the starting formula and that you have signed the note* (Ungurășan, 2017, p. 58).

Example for the second subject/ item: *It's been a week since you came back from camp with your classmates. Once you get home, you want to tell your parents the most important experiences you have experienced there. Write a text consisting of five sentences, in which you provide details about the camp you attended, answering the following questions: Where did you stay? What interesting activities did you do? Who did you make friend with? How was the weather? How did you feel?* (Ungurășan, 2017, p. 59).

4. Elaboration of the tests for the evaluation of the mathematical competence

4.1. Developing the mathematical competence in primary school

During the first three years of school teachers must develop students' ability:

- to identify and understand the role played by mathematics in the world;
- to make well-founded judgments;
- to use mathematics and to engage in the approach of mathematics in ways that respond to the need of individual life, as constructive, responsible and reflective citizen.

4.2. Evaluating the mathematical competence in primary school

The design of the evaluation tests for mathematics must be done so that the students are able to demonstrate their ability to apply knowledge to problem solving situations from the real world. The assessment tools created must also appeal to the previous experience of the students,

which was assimilated into non-formal or informal contexts.

Both in the process of teaching and developing the mathematical competence, respecting the national curriculum, *Programa școlară: Matematică și explorarea mediului* (OMEN nr. 3418/ 19.03.2013), as well as in the evaluation one, it is essential to:

- build a problem situation specific tot the context of real life/ world;
- organize the problem in accordance with the mathematical concepts;
- gradually *cut* the reality, which involves actions such as: making assumptions about

which of the attributes of the problem are important and then generalizing and formalizing the problem;
- solve the mathematical problem;
- give meaning to the mathematical situation in terms of a life situation.

In our original mathematics tests, a life situation/ context is presented at the beginning. All the evaluation items (objective, semi-objective and subjective) are built around that situation. We recommend that the problem situation around which the evaluation items are created should be concrete and real.
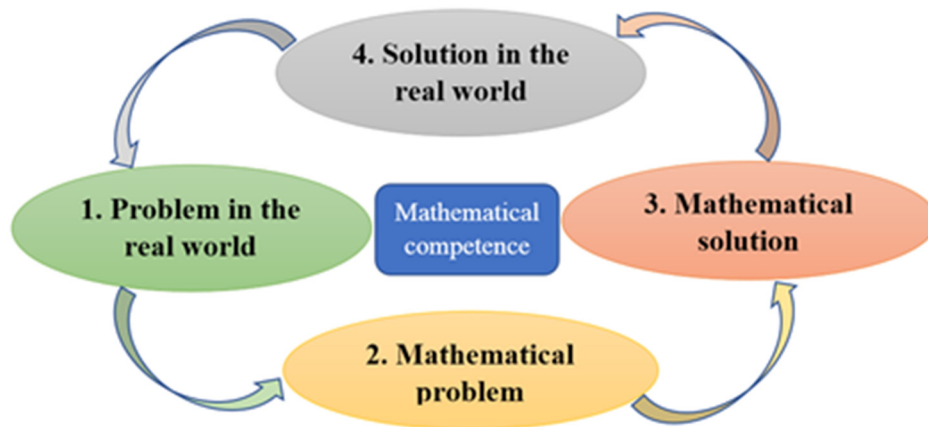

Figure no. 7. The evaluation of mathematical competence through items that require problem solving

Example of a math test item:

Life situation – *The Children's Cinema has released posters of the films that will be playing for a week.*

Andrew and his friends were late for the movie and the lights went out.

Requirement – *Look at their tickets and help them find their seats in the movie theatre. Discover the rule and fill the blanks with the missing numbers.*

Figure no. 8. Semi-objective item for the evaluation of mathematical competence through problem solving (Ungurășan, 2017, p. 102).

5. Conclusions

The elaboration of evaluation tools designed to prepare students for the end of the fundamental acquisitions stage requires a solid documentation from a legal, pedagogical and a methodological point of view. The assessment items must be permanently related to the specific or general competences that are developed to the students up to this age level. The evaluation tasks must be as diverse as possible and involve the students in the cognitive processes that allow them to demonstrate the competences acquired by the end of the second grade and to optimize their school learning.

Authors note:

The authors have equal contributions to this article.

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Teaching cases and declinations without Syntax a cross-language method

Teodora Onutz

Teaching cases and declinations without Syntax
a cross-language method

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Abstract	Most Indo-European languages have had or still have a case system and declinations that influence how connections between words and ideas are made. They have followed several stages of development since the age of the common Indo-European language and have gotten more complex in structure or have lost most traces of said declinations. Indo-European languages today can be classified according to what type of declinations they have and how many cases. This article offers a classification of the languages according to that aspect, with the purpose of enabling the teaching/ learning of this part of grammar based on the similarities or differences between the native language and the target language. By identifying the stage of the native language based on the existing declinations, one can see what is needed to understand the case system of the target language, without needing to know syntax. It applies to Indo-European languages only, but it can be extended to encompass any other language that has declinations.

Keywords:
declination; syntax; cases; machine translation; language classification; language teaching.

Zusammenfasung	Die meisten indoeuropäischen Sprachen hatten oder haben ein Fallsystem und Deklinationen, die Einfluss darauf haben, wie Verbindungen zwischen Wörtern und Ideen hergestellt werden. Sie haben seit dem Zeitalter der gemeinsamen indogermanischen Sprache mehrere Entwicklungsstadien durchlaufen und sind in ihrer Struktur komplexer geworden oder haben die meisten Spuren dieser Deklinationen verloren. Indogermanische Sprachen können heute nach der Art der Deklination und nach der Anzahl der Fälle klassifiziert werden. Dieser Artikel bietet eine Klassifizierung der Sprachen nach diesem Aspekt, um das Lehren / Lernen dieses Teils der Grammatik auf der Grundlage der Ähnlichkeiten oder Unterschiede zwischen der Muttersprache und der Zielsprache zu ermöglichen. Indem man die Stufe der Muttersprache anhand der vorhandenen Deklinationen identifiziert, kann man sehen, was zum Verständnis des Fallsystems der Zielsprache erforderlich ist, ohne die Syntax zu kennen. Sie gilt nur für indogermanische Sprachen, kann jedoch auf jede andere Sprache mit Deklinationen ausgeweitet werden.

Schlüsselworte:
Deklination; Syntax; Fälle; Maschinenübersetzung; Sprachklassifizierung; Sprache lehren.

1. Introduction

Cases and declinations are considered linguistic characteristics specific to Indo-European languages, along with word gender. This doesn't mean that all the languages of this family will have these characteristics, as some have lost them with time even if they did have them initially. Some elements, like cases, have been partially borrowed into other languages, like Semitic ones, sometime in Antiquity (Levin, 2002). Declinations are traditionally semantically associated with the roles of words in a sentence and are grouped according to that and the questions they answer to.

This can vary from language to language, a certain case can have some characteristics in Latin and others in Old Church Slavonic. That is why it has been hard to find

a general pedagogical approach to them that works in most languages and only language specific syntactic solutions are used to teach them. The origin of declinations lies in the Common Indo-European language, which was reconstituted but left no written documents. Its features have been passed on, in one form or another, to all its descendants and in order to understand certain linguistic phenomena it is easier to look at ancient languages and reconstituted grammar.

"Indo-European is a declinate language. The declination is the change made to the shape of a word to show the grammatical connections that it establishes. The changes are sometimes made inside the word or at the beginning but most often at the end. It is possible that the endings of declinations to have initially had an independent meaning, that has now been forgotten. They

were probably used like prepositions, auxiliaries and personal pronouns. In declinate languages like Indo-European, words are built from a root that in the early stages was probably used independently to express ideas. The roots are modified and become like stems that through declination form words. The whole process was initially one of composition through which specific endings were added one after the other to pronounceable forms through which a meaning was communicated." (Quiles & Lopez-Menchero, 2011, p. 155).

The European languages of today that have inherited declinations in nouns are the Slavic languages, German, Romanian – the only one of the Romance languages, Greek, the Baltic languages and Albanian. Amongst the ancient languages that used them were Latin, Old Church Slavonic and Sanskrit. Latin passed them on to Romanian, Old Church Slavonic to all the Slavic languages, Sanskrit – to the Baltic languages. In modern languages we often find a simplified version of cases: with some cases disappearing completely, like the Latin Ablative case and Instrumental case, which were replaced in Antiquity, and others getting identical endings, like the Romanian Genitive-Dative case. The modern way of understanding how cases work is based mainly on syntax, which is used in the same manner in languages with or without declinations to analyse a sentence. But this presumes that the roles of each case are identical or similar in all languages, which isn't true and that the declination is made according to gender, which is a fact in German and Romanian but not in Slavic languages. In Common Indo-European and in ancient languages the declination was done following a different system, as found today in Slavic languages because they detached later from the Common Slavonic and are thus closer to their origin.

Common Indo-European had three genders and the declination was made according to phonetics and accent, not gender. In time, some genders were grouped in the same declination because they had become better defined themselves (Haudry, 1992). The main distinction was between animate and inanimate nouns, which is still found in Slavic languages today and could be observed in some stages of Latin, when differentiating amongst neutral nouns and others – *neutral nouns do not alternate between the Nominative and Accusative case.* (Clarckson, Horrocks, 2007 p. 106). The neutral gender was initially used to designate inanimate things and only living beings were give masculine or feminine characteristics. The idea of gender was not central in the declination of words, what

mattered was phonetics and the distinction between animate and inanimate. Today, the teaching of the case system is done primarily through distinctions of gender, although many exceptions need to be also covered and the methodology used for one language cannot be extended to another.

2. Languages according to their types of declinations

In order to recover the concept of declination we must go back to its original shape and role and understand that meaning does not lie in the words themselves but in the connections between them. The declination is an ending that is added to a word to give it a new meaning and to connect it to another word, a phenomenon that existed before the appearance of genders. It is possible that in the early stages the declinations represented individual prepositions added to words. A declination can appear in nouns, pronouns, adjectives and numerals.

In the first stage there was no difference between animate and inanimate or gender, and words expressed pure concepts, so a declination showed the relation between ideas and was made only phonetically. Declinations appeared in pronouns as a rule firstly.

In the second stage there is a difference between animate and inanimate words, with new endings and the declination represents the relations between ideas, the distinction between being and object and is still done phonetically. Declinations appear in pronouns as a rule and maybe in a simplified version in nouns.

In the third stage there are masculine and feminine genders for animates and neutral for inanimate, with new endings and the declination shows the relation between ideas, the distinction being/ object, the gender of the word, it is done both phonetically and according to genders and is the most complex level. Declinations appear constantly in nouns, pronouns, adjectives and numerals in sophisticated forms.

In the fourth stage the distinction between animate and inanimate is gone, genders have gotten strict forms and have been extended to all words, no matter their nature and the declination shows the relations between ideas, the word's gender and is mostly done according to gender. Declinations can appear simplified in nouns, pronouns, adjectives and numerals.

In the fifth stage there is no declination in nouns, only in pronouns, there is no animate – inanimate distinction and genders are well defined and extended to comprise all the words, the relations between ideas are made through prepositions and the order of the words in the sentence. Declinations only appear in pronouns.

In the sixth stage there is no declination in nouns, only in pronouns, there is no animate – inanimate distinction, there are no genders, the relations between ideas are made through prepositions and the order of the words in the sentence. Declinations only appear in pronouns.

The Indo-European languages of today that have cases and declinations fit into one of these stages, based on the distinctions they have in words. English is a stage six, French and Spanish are a stage five, Romanian and German a stage four, Slavic languages and Latin are a stage three, Norse languages a stage two.

The evolution suggested above follows the logic by which we got to concepts of genders and cases, but it is not necessarily chronological, and it doesn't mean that all the languages have passed through all the stages. Depending on their linguistic family or branch they might have skipped some or gone back to a previous stage.

3. Teaching the case system

Teaching a new language must consider the nature of the native one, namely, to consider if the native tongue has genders, animate and inanimate distinctions, declinations, phonetic rules and if it doesn't, then they must be slowly introduced as concepts. For example, a Romanian learning Russian moves from a stage four native language to a stage three language, so from the concepts of gender and phonetic rule to the idea of animate/ inanimate. But an English speaker learning Russian must go from a stage six language to a stage three language, for which he needs to become familiarized with the idea of phonetic rule, animate / inanimate distinctions, genders and declinations.

The way in which the relations are formed between nouns/ adjectives/ pronouns in a language is easier to understand and learn than verbal tenses, because it is only needed to add new forms for the same meanings while with verbs, a complete rethinking of time is needed. The stage of a language can show what characteristics certain parts will have but it doesn't help in understanding how cases and declinations work. For this, we look at the connections between the words that give meaning and how they are established.

The simplest structure is:

Idea – idea – idea = word – word – word

In this way only simple meanings can be communicated, and the order of the words is important.

For more complex meaning we need:

Idea – connection – idea – connection – idea = word – preposition – word – preposition – word

The connection can then be added directly to the idea:

Idea + connection – idea + connection – idea + connection = word + declination – word + declination – word + declination

Or the most complex, the connection can be both added to the idea as used separately:

Idea + connection – connection – idea + connection – connection – idea + connection = word + declination – preposition – word + declination – preposition – idea + declination

The connections can be similar in meaning and used together, when a certain preposition requires a certain declination, or they can be completely independent in their roles.

Between ideas and words there can be a multitude of connections that create meaning: who does the action, to whom something belongs, whose part something is, etc. This would mean that for every new meaning created there is a new connection, either as a preposition or a

declination but it wouldn't be very efficient as some connections are made more often than others. It is more practical to use one connection for many meanings, a main one and some secondary ones, which is grammatically called a case. The case can contain a single meaning, several meanings, a declination, no declinations and certain prepositions.

A preposition can be used to establish more meanings and can differentiate between them by using a different declination. In this situation the preposition is used for more cases, depending on the required meaning. As practical examples, English establishes connections mainly through prepositions and only possession through declination, Romanian establishes connections through prepositions and declinations, but the prepositions are used for only one declination and Russian establishes connections through prepositions, declinations and the prepositions can be used with multiple declinations. When there is no form of connecting the words, what matters is their order in the sentence.

Presenting the cases in a language and their syntactic analysis is not a universal way of understanding and explaining the declination of nouns and their purpose. A given case can have different meanings in different languages. What matters more is how the relations / connections between the words are established. This can be done as stated before through the order of the words, prepositions between words, different endings for words (declinations), prepositions and declinations. The meaning is established through the relations so they can be presented as a summary of meanings, prepositions, endings/ declinations and the meanings they create. Or they can be presented starting from the relations that we would like to establish and the ways they are done in every language.

As an example, let's take the so-called Prepositional case in Russian, which doesn't exist in non-Slavic languages. It contains two meanings: where something is found, using the prepositions *in* and *to*, and what is discussed, using the preposition *about* but the declination stays the same. The declination comes first, as it is an ending/ connection for multiple meanings, differentiated

by the preposition. For morphological and syntactical philological reasons, it was established that these connections form this case called X but they don't help with the intuitive understanding of its role. The name and possible correspondences with other languages are done based on the existence of a common meaning in the multitude of meanings but can make practical learning and understanding complicated as such a case doesn't exist in many other languages. The same case can be explained starting from the ending that is changed in the words, i.e. the declination, as this change can refer to two meanings: where something is or what is discussed. In order to decide which one to choose, we should look at the preposition before it, so no knowledge of syntax is needed.

The key to teaching and learning the cases and declinations lies not in the cases and declinations themselves but in understanding the relation between meaning and form, namely which form contains which meaning.

4. Applications in other fields

The non-syntactic structure of cases and declinations can be applied in the field of Natural Language Processing and Machine Translations as well and developed into a general algorithm than can afterwards be adapted to suit each language. It can also be used to create connections between languages that share this sort of linguistic phenomenon, namely most of the Indo-European languages of today and even some outside of this linguistic family, like Arabic. If there is a stemming mechanism developed in said language then it can be applied along with it, but it works as an independent process as well. The basic structure is simple and needs only a limited amount of data to work.

Starting from the declination/ ending, having a specific meaning when applied to a noun, then adding the prepositions to change said meaning. Because there is a limited number of endings, with a limited number of prepositions creating a limited number of meanings, there shouldn't be any overlapping or confusion between them.

Word/ noun → meaning A

Word/ noun + ending 1 → meaning B

Word/ noun + ending 1 + preposition X → meaning C

Word/ noun + ending 1 + preposition Y → meaning D

Example: house

Дом + - а → дома (of the house)
Дом + - а + возле → возле дома (near the house)
Дом + - а + из → из дома (from the house)
Дом + - а + до → до дома (to the house)

*The equations above have been simplified for clarity. In reality, the construction of the language requires that the prepositions are placed before the noun.

For example (*возле + Дом + - а*)

Adding a different declination to the same parameters:

Word/ noun + ending 2 → meaning E
Word/ noun + ending 2 + preposition X → meaning F
Word/ noun + ending 2 + preposition Y → meaning G

Дом + - у → belonging to the house
Дом + - у + no → through the house
Дом + - у + k → towards the house

*The equations above have been simplified for clarity. In reality, the construction of the language requires that the prepositions are placed before the noun. For example (*no + Дом + - у*)

Then it can be connected to the declinations/ endings with the same meaning in another language:

Ending 1 in Russian = ending 3 in Romanian = ending 5 in English = ending x in Arabic

a (e.g. дома in Russian) = ei (e.g. casei in Romanian) = 's (e.g. house's in English) = i (e.g. بيت l-bayti in Arabic)

No matter the word that is declinate, the meaning of the ending will stay the same so cross language analysis is possible without translation. Using a dictionary of base words, it is possible to isolate the noun independently of endings and prepositions. Further processing would then yield the ending and the preposition and give the idea of an abstract semantic meaning. Since this abstract meaning is language independent, running the process across disparate documents, gives implementation paths for cross-language meaning extraction, syntactic graph construction and cross language search without the requirement of full translation.

5. Conclusions

The method presented in this article has many practical uses. First of all, it is designed for teaching the role and usage of cases and declinations without needing to have knowledge of syntactic analysis, which can be applied to any language that has them. This makes it easier to teach languages to both children and adults by simplifying an otherwise complex linguistic phenomenon that can remain elusive to people outside of philology.

In addition, the same method can be applied in software development, helping with cross-language references and text disambiguation. It needs a data base of words: nouns, prepositions, endings and an algorithm for sentence structuring that can be adapted to different language groups. The data bases for the languages can then be interconnected and the need for translations in cross-reference search can be eliminated, thus time and energy are saved.

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