Investigation of Future Teachers' Perceptions on Education, Teacher and Teaching through Metaphor Analysis

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Abstract

Keywords:

pedagogical metaphor; future teachers; education; teacher; teaching

The aim of the present study is to investigate the potentials of the method of metaphor analysis used to explore the thoughts, values and attitudes of participants in educational processes. In this study both qualitative and quantitative, metaphors developed on education, teacher and teaching were analyzed. Different and valid metaphors were obtained from 101 first-year students participating in initial teachers training at Technical University of Cluj-Napoca, Romania. Considering their reasons, those metaphors were collected under 6 different categories for each concept. The findings of the study revealed that the metaphors developed by students reflect their opinions, expectations and current psychological states. Based on the data, the study offers a set of adaptation solutions, oriented towards a more efficient teacher training program. The results are discussed in relation to their relevance for creating more reflexive future teachers and for the optimization of the teaching practice.

Zusammenfasung

Schlüsselworte:

Pädagogische Metapher; Lehrerausbildung; Bildung; Lehrer; Lehre

Der Zweck dieser Studie ist es, das Potenzial der Methode der metaphorischen Analyse zu untersuchen. Diese Methode wird verwendet, um die Gedanken, Werte, Einstellungen der Teilnehmer in Bildungsprozessen zu erforschen. In dieser qualitativen und quantitativen Studie wurden die entwickelten Metaphern über Bildung, Lehrer und Lehre analysiert. Verschiedene und gültige Metaphern wurden von 101 Studenten des ersten Jahres erhalten, die an der Lehrerausbildung an der Technischen Universität Cluj-Napoca, Rumänien, teilnahmen. Angesichts ihrer Gründe wurden diese Metaphern in 6 verschiedenen Kategorien für jedes Konzept gesammelt. Die Ergebnisse der Studie zeigten, dass die von den Studenten entwickelten Metaphern ihre Meinungen, Erwartungen und gegenwärtigen psychologischen Zustände widerspiegeln. Auf der Grundlage der Daten bietet die Studie eine Reihe von Anpassungslösungen, die auf ein effektiveres Lehrerausbildungsprogramm abzielen. Die Ergebnisse werden in Bezug auf ihre Relevanz für die Schaffung von künftigen reflexiven Lehrern und für die Optimierung der didaktischen Praxis diskutiert.

1. Introduction

Education and training activities contain perceptual characteristics such as attitudes and interests just as they contain the students' knowledge and skills concerning the subject matter. In this regard, it is estimated that the teachers can also influence their attitudes and perceptions towards education, teaching and learning. In the last decade, the pedagogical discourse emphasizes the key role that the teacher has in designing and delivering an effective educational program (Hativa, 2000; Borich, 2011; Hattie, 2014; Andronache & Bocos, 2016), as well as the positive correlation between teachers' reflection capacity in terms of their own teaching practice and students' quality of learning (Korthagen et. al, 2001). Examining the future teachers' perceptions towards concepts such as education, teacher and teaching helps us clearly identify their thoughts, perspectives and attitudes and may become a necessity in the context of concern for improving the quality and relevance of teacher training programs. The most powerful instruments for clearly identifying the perceptions of the future teachers regarding the abstract concepts are the metaphors developed by them.

The metaphors are the tools used to explain an abstract concept by establishing connections between the abstract concept and various concrete and observable concepts. Metaphors help to convey the intended meaning with fewer words and a stronger emphasis. In this sense, it is inevitable for individuals to use metaphors when describing their thoughts, feelings and life experiences. The aim of metaphor is to understand and interpret an issue according to another issue (Lakoff, Johnson, 2005). Studies of Lakoff and Johnson (2005) on metaphors are considered an important stage. Recently, data has been collected by using metaphors in qualitative studies.

Although there is abundant research exploring faculty's conceptions of teaching (Kane, Sandretto, & Heath, 2002; Kember, 1997; Samuelowicz & Bain, 2001), research exploring the conceptions of future teachers is scarce. Few researchers have focused on the conceptions of engineering professors (Donald, 1992; McKenna & Yalvac, 2007; Van Driel, Bulte, & Verloop, 2007) and even fewer on the conceptions of future engineering professors (Huang, Yellin, & Turns, 2005).

2. The role of metaphors in education

In an article from 2009, Elaine Botha highlighted the importance of metaphors as premises for the process of reception and understanding of changes in the educational paradigm. According to the author, educational metaphors accepted and rationalized by teachers are reflected in various aspects especially related to the organization of the didactic activity: choosing the didactic methodology, the general deployment of the activities and organizing teaching experiences for students, in the personal way where the interactions between the actors involved in the education process are formed. As Botha states, there is a widespread recognition of the fact that metaphors play a significant aesthetical, ornamental and pedagogical role not only in literature, but also in education. Botha also added that metaphors are found in all diverse areas of education and they are also constitutive of the models and theories that form the subject matter of the various disciplines taught in schools and universities.

The metaphor has long been used to successfully facilitate education, fulfilling several functions, such as creating new perspectives, enabling categorization or aiding memorization (Low, 2008; Sticht, 1993). The use of metaphoric analogies has been pointed out as an essential aspect of academic discourse and practice, especially in the creation of theories (Boyd, 1993; Holyoak & Thagard, 1995). Metaphors can help teachers communicate with learners who need to understand a theory (Lawson, 1993) or abstract concepts (Duit, 1991); they allow learners to generate inferences and test predictions (Dagher, 1995); they enable teachers to individualize teaching approaches to different learners and their level of understanding (Duit, 1991). The prominence of metaphor in a certain context can enhance the learner' recall information (Cameron, 2003), especially in the case of more concrete metaphoric constructs and expressions. The use of metaphor in educational contexts is especially beneficial for learners actively involved in generating their own analogies. Several studies have shown that such learners have improved their critical thinking, questioning and problem-solving skills and the ability to apply those skills to scientific texts and ideas (Wittrock & Alesandrini, 1990). The research on metaphor in oral educational contexts focused on the school classroom interaction (Cameron, 2003) and the university lecture (Low, Littlemore & Koester, 2008) and paid a special attention to the metaphor's pedagogic functions, its role in structuring the discourse, its systematic and spontaneous uses, combined with gestures. The integration of metaphors in the teaching and learning process gives learners inspiration and motivation, facilitates understanding of relationships, similarities and differences, bridges elements of the known and unknown world and, in addition, helps the process of conceptualizing new knowledge (Leino & Drakenberg, 1993). Furthermore, applying metaphor analysis to educational research will contribute to a better understanding of the hidden motives that influence the world of education (Fábián, 2006).

When metaphors are used in the training of future teachers not only the positive changes and developments in the affective domain of their characteristics are observed, but also their effectiveness on the formation and development of their professional attitudes, perceptions and viewpoints towards situations or facts. At the same time, based on their observations and experiences, future teachers make connections between their new perceptions, behavior patterns and attitudes to situations and facts, and their perceptions and experiences from the past.

Within this framework, the aim of the present study is to investigate the opinions of future teacher through their metaphors about education, teacher role and teaching profession.

3. Research design
3.1. Purpose of the study

Our study was focused on identifying the opinions of first year future engineering teachers about education, teacher and school teaching by means of metaphors in order to structure personal and professional experiences helpful for building an effective belief system.

The study specifically looks for answers to the following questions:

1.Which metaphors do future engineering teachers use about education, teacher and teaching profession?

2. What are the conceptual categories drawn from metaphors of future engineering teachers continuing their studies at initial training on the concepts of education, teacher and teaching profession?

3.2. Participants

The participants of this study consist of first year teacher students attending the initial training program during the second semester of the 2016-2017 academic year at the Technical University Cluj-Napoca, Romania. A total of 101 teacher students participated in the final study, being at the classical university studies age. The proportional division of gender was as follows: 38 females and 63 males.

3.2. Procedure

A qualitative research method has been used in this study. Qualitative research is an inductive research process focused on the processing and understanding, where the researcher is the primary data collection tool and data is described in depth (Merriam, 2009). The study has a descriptive character since it aims to depict the

phenomenon it focuses on as it actually is. Metaphors have been used as qualitative data collection tools in the study, as they are used for the purpose of describing a circumstance.

Participants were asked to complete the sentences such as *„Education is like . . . because……”, „A teacher is like . . . because ...”, „Teaching is like . . . because……”* by focusing on only one metaphor to indicate their conceptualization. The content analysis technique was used to analyze the data. First, the metaphors and then conceptual categories will be identified according to metaphors.

Out of the 110 students participating in the study, 101 of them developed metaphors that had a validity permitting it to be used in the study. The consistency in the explanations of the metaphors developed by the participants has been taken into consideration.

4. Results

In order to determine future teachers' perceptions and views, metaphors were used. As one of data collection techniques of a qualitative research, metaphors are one of the most important methods utilized to examine correctness of theories based on so many variables (Jensen, 2006).

The purpose of this study is to reveal the perceptions of future engineering teachers on the concepts of education, the teacher' s role and teaching profession through metaphors. The data has been analyzed by means of content analysis. Metaphors developed by participants have been assessed in terms of their common properties by taking their justifications into consideration and then they have been categorized according to these properties. From the total metaphors developed by the participants for each investigated concept, several categories were established as follows: education (71 metaphors under 6 categories), teacher (52 metaphors under 6 categories) and teaching (64 metaphors under 6 categories).

Within this scope, the process of the analysis and interpretation of the metaphors future teachers developed about education, the teacher's role and teaching profession consists of the following five stages: recording the data, elimination, forming the categories, validity and reliability assurance and presentation of the data.

Recording the data: The sentences filled by the participants were numbered. Three word files were opened for metaphors on education, the teacher's role and teaching profession and then an excel file regarding personal information was opened to record all the information.

Eliminating and sorting stage: After two researchers analyzed metaphors written by prospective teachers, 9 survey forms were excluded from the assessment for a variety of reasons (to leave blank, not to mention metaphors or not to write the reason of it even if they wrote about a metaphor etc.). In this research 101 participants' metaphor expressions were evaluated.

Forming the categories: Metaphors that were chosen after the stage of eliminating and sorting, were analyzed with the method of content analysis. First of all, metaphors were determined and then metaphors were collected under categories according to the explanations written by participant.

Validity and reliability assurance: Two separate researchers examined and coded the metaphors of future students on education, the teacher's role and teaching profession. Reliability of the research was calculated by using the formula of Reliability = Consensus / (Consensus + Divergence) (Miles & Huberman, 1994). Reliability coefficient was found as 85% in education metaphor of future teachers, 87% in teacher metaphor and 84% in teaching metaphor, respectively.

Presentation of data: Metaphors were presented according to categories. Due to the fact that direct quotations clearly reflect the opinions and experiences of participant, examples were given from the metaphors used by the participants. At the end of the example statements taken from participants, the faculty and survey number were written in brackets.

5. Findings and discussion

In this section findings will be discussed according to the sub-problems.

5.1. Metaphors used by future teachers for the „education" concept and categories derived from those metaphors

When metaphors obtained from this research were generally considered, 101 valid metaphors were totally used. Metaphors were categorized according to why those metaphors were used while analyzing metaphors. The metaphors for the „education" concept developed by the future teachers were divided into six categories. The categories concerning the developed metaphors are shown in Table 1.

Table 1. Categories of the future teachers' metaphors about education

Categories metaphors	Metaphors	Frequency (f)	Percentage (%)
Information source	source of knowledge (n=4), soul nourishment (n=1), the lock of knowledge (n=1), gate to knowledge (n=1), the sky speaker (n=1), exploring the information (n=1), the art of self-discovery and creativity of uniqueness (n=1), the mind-company (n=1), the cultivation of soul and mind (n=1) , the dictionary of life (n=1), map for knowledge (n=1), culture (n=1), island to be gradually discovered (n=1), source of life (n=1), meeting between the individual and society (n=1), knowing the fire without getting burned (n=1), the desire to know (n=1)	20	19.80
Development	tree (n=7), human development (n=7), shaping (n=5), the cornerstone of the society (n=3), the scale of the sky (n=2), polishing the diamond (n=2), step to humanity (n=1), house (n=1), foundation (n=1), window to the future (n=1), hammer on hot iron (n=1), gardening (n=1), maturation (n=1), a worm that turns into a butterfly (n=1), a person's past (n=1), bridge on a human life is concerned (n=1), art (n=1), human survival (n=1), life from another person's perspective (n=1), lifeline (n=1), building a better world (n=1), plasterin (n=1), guidance (n=1)	43	42.57
Enlightenment	fire (n=2), intellectual light (n=1), the eye of a storm (n=1), the light at the end of the tunnel (n=1), the second birth (n=1), the transition from darkness to light (n=1)	7	6.93
Results	Lego toy (n=1), fruit (n=1), ore (n=1), motor (n=1), diamond (n=1), gold (n=1), the plate cake (n=1), product (n=1), the stick man helper blind, deaf human hearing aid and poor man's fortune (n=1), honey (n=1)	10	9.90
Key to success	successful future (n=5), bright way to reach success (n=3), compass towards infinity (n=1), key to success (n=1)	10	9.90
Qualitative labels	heaven on earth (n=1), is better than pearls (n=1) salt in food (n=1), it is vital life (n=1), freedom (n=1), the aorta of life (n=1), life (n=1), lifestyle (n=1), water (n=1), the drop of brightness (n=1), the white coat (n=1)	11	10.90
Total		101	100

In relation to the metaphors that the future teachers developed about education (Table 1), it is seen that they expressed their opinions about education through 71 metaphors and 6 categories: information source, development, enlightenment, results, key to success, qualitative labels.

The mostly used metaphors were as follows: „development" (7 times), „tree" (7 times), „successful future" (5 times), „shaping, modeling" (5 times), „the source of knowledge" (4 times), „the cornerstone of society" (3 times), „bright way to reach success" (3 times).

Nearly a quarter of the participating students was focused on education as an information source, a transmission of ideas, a perspective that otherwise is very largely shared by the collective opinion. A sample statement regarding the information source category is: „... is like a map for knowledge. Because it makes us find our road in teaching world."

A category of metaphors the participating future teachers developed about education is „development". Participants developed metaphors indicating complexity and expressing the fact that the scope of education is the development, the modeling of the students' personality, the source of knowledge, the cultivation of the soul and the mind, ensure a successful future, it is essential and vital in life. A function of education is visible here, with more emphasis on personality development than on social development and integration. The fact that the majority of students that fall into this category of answers equal education with building, developing and shaping personality signals an initial orientation of them towards teaching as supporting students' positive evolution. A sample statement regarding the „development" category is: „.... is like guiding knowledge. Because s/he trains teacher for becoming teacher."

A little number of participants (9.90%) had answers related to education as a set of products. Given the little formal knowledge experience first year students have at the beginning of their studies, their focus on education as a product was to be expected. We anticipate that the deeper insight they will have in the training years on the processes of teaching and learning will make them increasingly aware on the importance of processes in education as well as that of products.

We notice the generally positive attitude towards the education as a key to personal and professional success. A sample expression related to metaphors in „key to success" category is as follows: „.... is like a key to success. Because opens all questions' door."

11% of students' visions on education were expressed through synthetic qualitative labels that lead to the idea of general recognition the importance and necessity of education.

Metaphor sample in "qualitative labels" category is as follows: „...like salt in food. Because without it, it is savourless."

5.2. Metaphors used by future teachers for the „teacher" concept and categories derived from those metaphors

Concerning the findings about the metaphors that first year students use about „teacher" concept (Table 2), it is seen that they expressed their opinions through 52 metaphors organized in 6 categories: model, guide, knowledge provider, enlightener, negative social status, specific features.

Table 2. Categories of the future teachers' metaphors about "teacher" concept

Categories metaphors	Metaphors	Frequency (f)	Percentage (%)
Model	model (n =7), gardener (n=3), sculptor of personality (n=3), the artist (n=2), jewelery (n=1), farmer (n=1), the casting mold (n=1), example to follow (n=1), worker (n=1)	20	19.80
Guide	guide (n=21), parent of education (n=6), pioneer (n=4), pillars (n=2), leader (n=2), scale of the sky (n=1), gate to wisdom (n=1), mentor (n=1), catalyst (n=1), tree root (n=1), master (n=1), driver (n=1), motor (n=1), coach of a team (n=1), key for closed roads (n=1), water nest (n=1)	46	45.55
Knowledge provider	source of knowledge (n=4), interactive book (n=3), living water spring (n=2), dictionary (n=1), chain huge of knowledge (n=1), erupting volcano every day (n=1), knowledge mill (n=1), learning mother (n=1), immortal knowledge wings (n=1)	15	14.85
Enlightener	candle (n=2), inspiration for the soul (n=2), angel of light (n=1), light guide (n=1), window through which the light comes (n=1)	7	6.93
Negative social status	The Glabrous of the Harap-White Fairytale - necessary evil (n=1)	1	0.99
Specific features	owl (n=1), child (n=1), Saint Sunday (n=1), oxygen in water (n=1), hearth (n=1) , nature (n=1), container that is not empty (n=1), intelligent (n=1), hero in time combat (n=1), engineer can solve anything (n=1), friend (n=1), working bee (n=1)	12	11.88
Total		101	100

Among those metaphors, mostly used metaphors were as follows: „guide" (21 times), „model" (7 times), „parent of education" (6 times), „pioneer" (4 times), „source of knowledge" (4 times), „interactive book" (3 times), „gardener" (3 times), „sculptor of personality" (3 times).

Nearly a quarter of the participating students saw the teacher as a guide referring to specific teaching and school learning activities. A sample statement regarding the "guide" category is: „.... is like a guide. Because we are guided by his/ her knowledge and experience".

Another category of metaphors the participating students developed about „teacher" concept is „knowledge provider". Participants developed metaphors belonging to this category because they thought that the teacher plays an important role in keeping and sharing of knowledge in order to make decisions about the effectiveness of the process, the structuring of the teaching process and directing of students according with their interests and talents. Future teachers most frequently developed the metaphor of „source of knowledge" among those belonging to the „knowledge provider" category. The following statement by a future teacher is an example of the metaphors belonging to this category: „.... is like a dictionary. Because s/he explains us professional knowledge".

Most of the students referred to teachers both as models, knowledge providers and as illustrators of certain specific features which recognize that the responsibilities and mission of teachers is driven not only by the formal professional attributions, but also by dedication, commitment, intelligence and communication (n=12).

Metaphor sample in „enlightener" category is given below: „... like a candle. Becauses s/he enlightens around, s/he is the person who guides the society."

When Table 2 is examined, it is seen that the future teachers used expressions to explain metaphors such as: „a person who provides students a subject specialist and source of knowledge about his/her subject area", „a person who presents the learning materials according to the levels of his/her students persistently", „a person who starts an activity, but cannot do it alone, students need it too", „a human being that loves and devotes herself", „a person who endears himself/ herself to their students", „a person who is model to his/ her students through his/ her behaviours", „a person who has good relations with his/ her students", „a person who has good command of his/her students, subject – area and classroom", „a person who understands his/ her students", „a person who performs his/her profession as it requires under all circumstances".

The teacher forms and develops students' competency of learning to learn, realizing that this means nothing more than providing complete, well organized, ready-made knowledge, but rather the training to students of autonomy in managing their own learning, the awareness of strengths and weaknesses, both on a personal and professional level, increasing the interest in developing school and personal values and attitudes (Peculea, L., 2015).

5.3. Metaphors used by future teachers for the „teaching" concept and categories derived from those metaphors

Categories of future teachers from first year initial training on „teaching" concept are given at Table 3.

Table 3. Categories of the future teachers' metaphors about "teaching" concept

Categories metaphors	Metaphors	Frequency (f)	Percentage (%)
Process	way of transmitting knowledge (n=9), continuous journey tending to infinity (n=2), transfer (n=2), path to life (n=1), grinding process (n=1), the magic (n=1), knowledge interpretation (n=1), the triggering (n=1), change of substance in containers (n=1), storm mind (n=1), journey to the center of the earth (n=1), hierarchy (n=1), how an animal takes its chick to hunt (n=1)	22	21.79
Disseminating information	sharing of new knowledge (n=17), fruit planting, sowing (n=7), full mine of jewels (n=1), cascade (n=1), coal (n=1), the Jordan of Education (n=1), arch of the lessons (n=1), power (n=1), cookbook (n=1), story (n=1), rainbow of knowledge (n=1), flight information (n=1), inheritance (n=1), gift (n=1), tree irrigation (n=1), solar wave emission (n=1), presentation of a label (n=1), writing a book (n=1), Swedish buffet (n=1)	41	40.59
Guidance	guidance (n=2), forming (n=2), modeling (n=2), help (n=2), art (n=2), perfecting (n=1), continuous netting (n=1), sculpture of the brain (n=1), dough (n=1), building (n=1), the helm of a ship (n=1), creating a straight path for an tortuous field (n=1), forging (n=1)	18	17.82
Socialization	interaction (n=1), the need to share with others what the teacher is already known (n=1), discussion during the road (n=1), way of socialization (n=1), bridge of ideas, experiences (n=1)	5	4.95
Preparing for the future	preparation unknown (n=1), helping to take off (n=1), occupation (n=1), opportunity (n=1), way to start independent life (n=1)	5	4.95
Reflections	overflow experiences (n=2), language learning (n=1), care (n=1), vital process (n=1), difficult (n=1), sacrificing (n=1), dedication (n=1), essential (n=1), the lioness who takes care of her cubs (n=1)	10	9.90
Total		**101**	**100**

As seen in Table 3, the student teachers developed 64 metaphors in total and 6 categories about teaching profession: process, disseminating information, guidance, socialization, preparing for the future, reflections.

The „teaching" metaphors most often mentioned had in their substance the following orientations: „sharing of new knowledge" (17 times), „way of transmitting knowledge" (9 times), „fruit planting, sowing" (7 times), „guidance" (2 times), „forming" (2 times), „modeling" (2 times), „help" (2 times), „art" (2 times), „continuous journey tending to infinity" (2 times), „transfer" (2 times), „overflow experiences" (2 times).

Thus, 21.78 % of students referred to teaching as to a process that involves students and is focused on the method of transmitting information, a continuous process of triggering, hierarchy, transfer of knowledge, maintenance of the learning activity of the students. However, the views of teaching profession as acquiring knowledge, sharing of new knowledge prevails in the answers of the participants (n=17). A sample expression related to metaphors in "Disseminating information" category is as follows: „*... is like a cookbook. Because it contains recipes of knowledge of different fields."* We emphasize that teaching is not limited to passing a volume of knowledge to a particular subject, but it involves

systematic actions and operations undertaken to organize, develop and guide the learning activities performed by students.

In the first-year students' view, teachers should resort to valuing a set of procedures and techniques in presenting the subject matter, to motivate and encourage students to learn, to guide them from a cognitive and metacognitive point of view and to lead them to achieve appropriate academic results.

In this respect, students are actively involved in understanding and knowledge, taking into account the assumption that the mere presentation of content does not mean anything to the student unless it suggests/recommends/indicates concrete ways of cognitive and metacognitive reporting to that content.

Naturally, we can talk about the predominance of a category, but it is essential that the major purpose of teaching is to promote and support learning and, implicitly, to achieve the proposed educational goals. These standards are designed to provide guidance for understanding how students learn, what should be taught and the teaching skills necessary to support meaningful student achievement. While some students learn to self-regulate their learning, others need guidance, not only to acquire the strategies, but also to develop the conditional knowledge necessary to know how, when and where to these strategies can be applied

appropriately. Metaphor sample in "guidance" category is given below: „.... *is like guiding knowledge. Because s/he trains teacher for becoming teacher."*

Teaching for learning is enhanced when students receive guidance for improvement on their work in an appropriate atmosphere, socializing, communicating ideas, feelings, and experiences. Participants developed metaphors belonging to „socialization" category because they thought that communication, interaction, constantly changing ideas, feelings are an indispensable part of the process of teaching.

The tendency identified in the sixth category answers needs more attention, as most of the attributes associate with teaching mentioned by participants incline to be positive. Based probably on their schooling experience, first year students appreciate that present teaching is a vital process, essential, involves care, sacrifice, dedication.

Concerning the expressions that future teachers used in order to explain the metaphors about teaching profession, it is observed that the students used the following expressions to explain teaching profession metaphors, such as : „to deliver in order to fill an empty vase", „a profession shapes the future and provides the training of new generation", „to be able reach everyone in the society", „to construct a human being (an individual)", „to form characters, capacities, attitudes", „raising an individual", „a continuous journey tending to infinity, it does not have an end", „the need to share with others what the teacher already knew", „the way a teacher conveys to a student his knowledge in a certain field", „transmission of knowledge to students via endless patience and efforts."

Conclusions

The research method of metaphor analysis proves to be a potent tool for investigating the values, beliefs and attitudes of the participants of educational processes. Although the application of some variants of the method tends to be influenced by the personal attitudes of the researcher and, as a result, its reliability is often challenged in educational research, we find that the technique is presumed to allow the participants to explore their own beliefs and to raise self-awareness among the target group.

In this study, the metaphors of future teachers on education, teacher and teaching were analyzed. Thus, conceptual categories of future engineering teachers from initial training on „education" concept are information source, development, enlightenment, results, key to success, qualitative labels. On the other hand,

conceptual categories of prospective teachers on „teacher" concept are model, guide, knowledge provider, enlightener, negative social status, specific features. In this study, the 101 metaphors of prospective teachers for the „teaching" concept were clustered under six conceptual categories entitled as follows: process, disseminating information, guidance, socialization, preparing for the future, reflections.

Providing a quality education highly depends on the quality education of the teachers. Teachers who develop individuals' current skills and help students' learning, who don't just give the information the students but want them to gain methods of obtaining information, as well as to gain the skill of using knowledge can educate the future individuals. In this respect, being educated as a guide, pioneer, model is of high importance. The teacher is the leading character in teaching period for years.

Metaphors help to understand the thoughts of people. As it can be seen in results metaphors can be used to collect data. More researches can be studied about becoming teacher and initial teachers training programs. We consider that training the future teacher students' reflection and self-reflection capability is essential for raising awareness and for structuring personal and professional experiences, a principle firmly supported by the studies of Korthagen et al. (2006). Encouraging personal or collective reflection of the students is a valuable source of personal and professional development, allowing them to permanently self-analyze their ideas, learning and training experiences, to evaluate their progress, to improve their future efforts, both from the cognitive and metacognitive perspective, to develop cognitive and metacognitive reflection strategies and tools, such as: (self) reflection journals, learning portfolios, observation sheets, self-evaluation sheets etc. (Bocoș, M.-D., 2013).

Exercising reflection on the key issues that teachers face in their professional practice must become a principle included into the initial and continuing teachers' training. Reflection can be oriented to enhance the bases of students' professional metacognitive knowledge, a task that can be addressed during practical training by emphasizing self-observation and evoking personal arguments for didactic decisions (Glava, A., Glava, C., 2015).

Obviously, the investigation of pedagogical metaphors that describe the psycho-pedagogical vision proper to each student can represent not only an assumption, but also an essential step in the adoption of a metacognitive behavior in the act of designing and achieving the educational act and also in increasing the capacity of students to become aware of their thoughts and of their influence on teaching decisions.

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