Curriculum design for a training program in multigrade instruction

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Abstract

Multigrade schooling is a social reality in developing countries, and also an educational policy to enhance equal opportunities for children. According to various studies, multigrade teaching is an efficient alternative for conventional class organization, with multiple benefits for students. Generally, teacher training is limited in the degree to which it can prepare teachers for multigrade instruction. Starting from a recent initiative regarding teacher training in Romania, this paper sustains a realistic expectation for new curriculum writing, as a preliminary component of training program. This investigation, based on Need Analysis, reveals some teachers' objectives and expectations, as well as motivational factors in order to participate at the training program. Other aspects, such as interest for a specific theme or instructional strategies were included in curriculum offer.

Keywords: multigrade instruction; curriculum design; instructional strategies; classroom management.

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Zusammenfasung

Mehrbereichslehr Schule ist eine gesellschaftliche Realität in den Entwicklungsländern, sowie auch eine Bildungspolitik, um gleiche Chancen der Kinder zu versichern. Gemaess verschiedenen Fachstudien ist Mehrbereichslehr eine effiziente Alternative zur herkömmlichen Klassenorganisation, mit mehrfachen Nutzen für die Studierenden. Die Lehrerausbildung wird in dem Maße beschränkt, auf die sie können Lehrer für Mehrbereichs - Anweisung vorzubereiten. Ausgehend von einer aktuellen Initiative für Lehrerausbildung in Rumänien, die vorstehende These uenterstuezt eine realistische Erwartung für einen neuen Lehrplan, als vorläufige Bestandteil der Ausbildung. Diese Untersuchung, gegruendet auf Need Analysis, stellt vor die Ziele einigen Lehrern, sowie die Erwartungen und die Motivationsfaktoren, um beim ein Ausbildung Programm beteiligen zu koennen. Andere Aspekte, wie beispielsweise die Interessen für ein bestimmtes Thema oder Unterrichtsstrategie wurden im Curriculum Angebot enthalten.

Schlüsselworte: Mehrbereichslehr; Lehrplänen; Unterrichtsstrategien; Klassen - Management

Curriculum design for a training program in multigrade instruction

1. Introduction

Multigrade schools occupy a distinctive place in the history of education. Usually, multigrade instruction is offered to a limited group size in primary school, a teacher for each grade being impractical and inefficient. Suitable pedagogical training and resources are both critical for successful multigrade teaching. One teacher needs to manage two or more classes all together and be in charge with their instruction (Birch & Lally, 1995; Hargreaves, 2001). Although it is a global phenomenon, the social context is different from country to country. It is generally known that multigrade instruction is present in developing countries.

In our country, this type of instruction is encountered in small schools, in rarely populated areas, especially in rural areas, with a hard access because of geographical/economical limits. In Romania, teacher training is certainly limited in the degree to which it can prepare teachers for multigrade teaching experience. Besides, an unsecure context opens new challenges that influence teachers` opinion to perceive a reduced value of multigrade instruction due the inadequate official support. Many multigrade schools are poorly resourced; and the attitudes and behaviors of teachers, parents and pupils towards multigrade teaching are frequently unconstructive.

It is commonly confirmed in educational studies that multigrade teaching is more complex than single grade teaching, but no disadvantageous. Despite of this, there is a reserved attention provided to this issue in curriculum design policies; there is no official administrative support for multigrade teachers. As a result of need analysis (NA), a proposal for a future training program was planned and provided in order to fulfill various teachers` interests for multigrade instruction (related to curriculum, strategies and classroom management).

The present research has the aim to identify the most important characteristics of an efficient training in teachers` opinions. In order to generate the most optimal training practices/provide useful instructional resources to aid beginners and experienced teachers, curriculum experts creates a new curriculum proposal for multigrade instruction. The course was accredited by the National Council for Teacher Education (CNFP) and was proposed to the teachers as a program called *Instruction Management in Multigrade Instruction.*

2. Literature review

2.1 Studies on multigrade instruction. Brief selection

In an article written by S. Veenman, "Cognitive and non-cognitive effects of multigrade and multiage classes", 56 relevant studies from Canada, USA and Europe have been analyzed, based on evidence provided by experimental data. Summary of findings provides different opinions: 1. There are no differences between multigrade and single classes with regard to the performance of pupils; Multigrade classes are superior in terms of socialization inside/between classes, if we consider the multi-age

composition; and MI has negative effects on students, an issue caused by different   issues of students (low investment in education, poor families origins) and teachers (unqualified teachers, poorly trained, beginners). See the examples below:

- Miller (1990) and Hargreaves (2001) show that students, because of time limits, develop metacognitive and self-assessment skills;

- Teachers in Finland, where there is a tradition of collaborative practices, older students usually help others (Petrila, 1978);

- In the US, there is a little difference between classes' competences and performances.

- Moreover, students has a positive attitude towards school, compared to their peers from single classes (Miller, 1989);

- The most extensive research has been conducted on Escuela Nueva program in Columbia (Rojas Castillo, 1998); an early assessment of this program revealed some positive effects of multigrade instruction on self-esteem and civic behavior of pupils (Colbert, Chiappe, and Arboleda 1993);

- Gender studies (Berry, 2001; Kutnick, 1997) reveals that multigrade instruction provides a successful experience especially for boys with low performances;

- Other studies reinforce the strengths of heterogeneous age composition, in terms of changing experience and motivation;

- Peer-learning is a valuable instructional approach in multigrade instruction (Veenman, 1995);

- According to Miller (1991) multigrade classes develops a familial unique climate, based on mutual support.

2.2. Studies on teacher training

Veenman, Lem, and Roelofs (1989) describe a research-based development program for Dutch teachers which contain *instructional time, effective methods of instruction, classroom management and organization, autonomous learning strategies, and school climate and leadership.* The interest for *instructional time* reveals the importance of time schedule and techniques use.

Findings of other research, which described various aspects of two-grade teaching in USA (OERI, 1990), mentioned 102 strategies that teachers established being effective in multigrade instruction. These strategies were split into the following categories, listed in order of occurrence in teacher's answers: *classroom management, time management, grouping, parent interaction, and socialization.*

In an older revision, Phillips et al. (1995) formulate 125 teachers` needs, after hundred interviews and observations in multigrade classes. A final conclusion showed that, teachers' needs or requests were not different from single-grade teaching.

3. Research methodology

3.1. Description of the investigated population

The research group is formed by 150 respondents, primary school teachers, from a professional database of Ministry of Education. 71% of respondents are shown to be positioned in rural areas. Other available supporting data are related to the experience of teachers – the majority, over 10 years (95%) and gender - predominantly female (99, 5%).

3.2. Need analysis objectives

A purpose of this study is to highlight the following salient aspects:

1. Identify learning objectives in a multigrade teaching centered program;
2. Reveal the most important teachers needs;
3. Find effective practices in the specific context of training;
4. Discover challenges/opportunities encountered by teachers when teaching in multigrade classes.

3.3. NA methodology

Training Needs Analysis (TNA) is a method of identifying psycho-pedagogical characteristics of a structured learning group, used to generate further methodological training options.
The present analysis has, however, certain limitations related to the applicability or qualitative interpretation of the provided data. These errors are common to any analytical approach based on survey, be it scientific research, evaluative research, impact study or, in this case*, a diagnosis of training needs*. This research report may provide effective information that can be integrated into educational practices for several categories of beneficiaries or stakeholders: teachers, curriculum experts, trainers, TOT.

3.4. Interpretation of collected data

The relevance of traditional teacher education (fig.1) for multigrade schooling is extremely low – 1%. Teachers consider that it takes a substantial effort to apply learning principles in the context of multigrade instruction. We therefore conclude that the training content should have a significant potential for further adaptability.
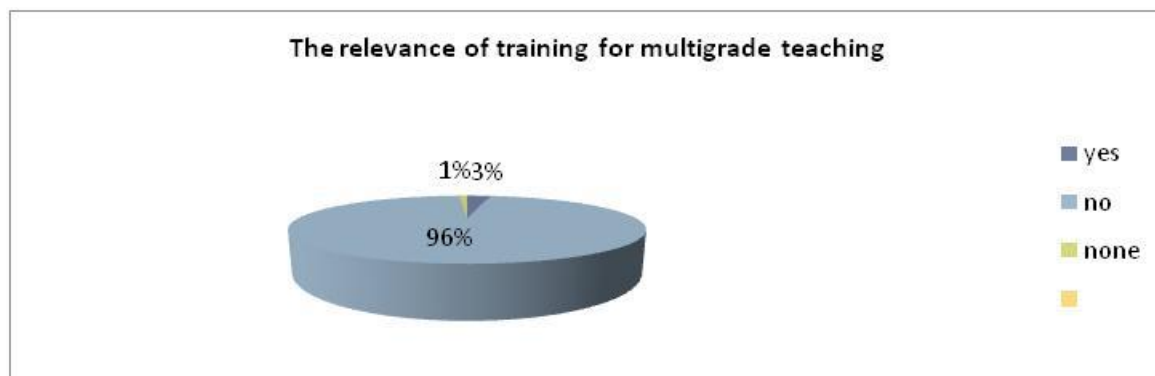

Fig. 1. The relevance of traditional training for multigrade teaching

Most respondents are agreeing with those statements supporting the most important values of a training course: *practicality of pedagogical content, and the adaptability to teacher's profile.* They are, in fact, current requirements of competence-based curriculum design, marking a clear distinction of focus on content or objectives based pedagogy. This kind of perspectives has produced major errors in educational practices. Present research suggests an approximation of existing skills in the profile of the trainees: *well prepared, with practical experience and motivated for innovative teaching and management strategies.* Referring to a new training program proposal, 58% of respondents agreed that the provided information should have a *pragmatic purpose in* relation with their teaching needs.
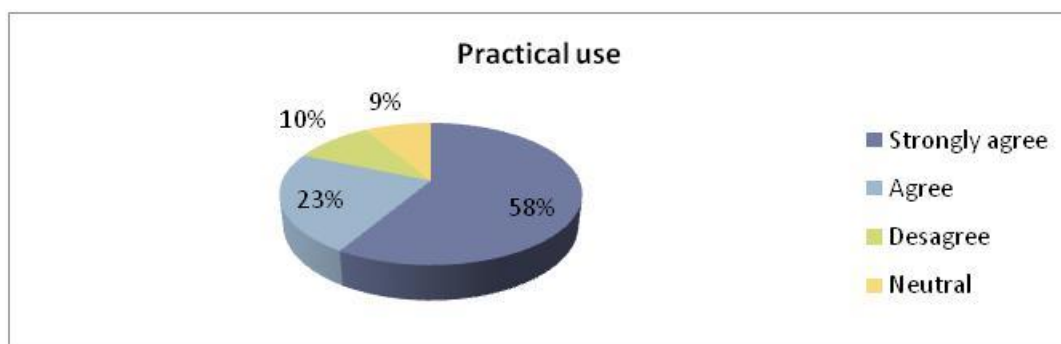

Figure 2. Characteristics of training curriculum

With regard to *the desired degree of novelty of* information, 41% and 34% of respondents considered this aspect being an important curriculum attributes (Figure 2). During the present research, teachers mentioned that preparation for multigrade classrooms was significantly important. The most frequently mentioned need was related to the *classroom organization* issues. This was followed by developing skills in curriculum development (*unit planning*), *individualizing instruction* and *resources and materials.*

In curriculum development, an essential aspect is the reflexivity of teachers regarding professional goals. Next expectations, with a similar quantification (about 25 %) have a cumulative effect on professional aim: development of social and management competence; optimizing instructional design skills; stimulating creativity and problem solving capacity; developing skills transfer and application of knowledge in practice; applying interactive teaching methods.

From these statistics, it appears the necessity affirmed by teachers *to optimize teaching practices through interactive applications.* A small percentage (6%), considers cognitive competence (scientific knowledge) being dominant. A high percentage (81%) considers that an evident expectation is associated with the *management classroom.* The central conclusion reinforces the idea that teacher competence is inefficient without specific management skills.

Training needs analysis indicates a profile of existing skills in the manifest behavior of teachers. In this manner, we can estimate some integrative ways of developing existing skills (psycho-pedagogical, scientific and digital skills). All teachers are interested in *active learning methodologies*, especially in the multigrade setting. Usually, organizing students in small groups dominates. Figure 3 shows the percentage of respondents whose opinion is according to the importance of *grouping strategies.*

Ability grouping, cooperative learning, cross-grade and peer tutoring were identified as essential strategies in multigrade classes.
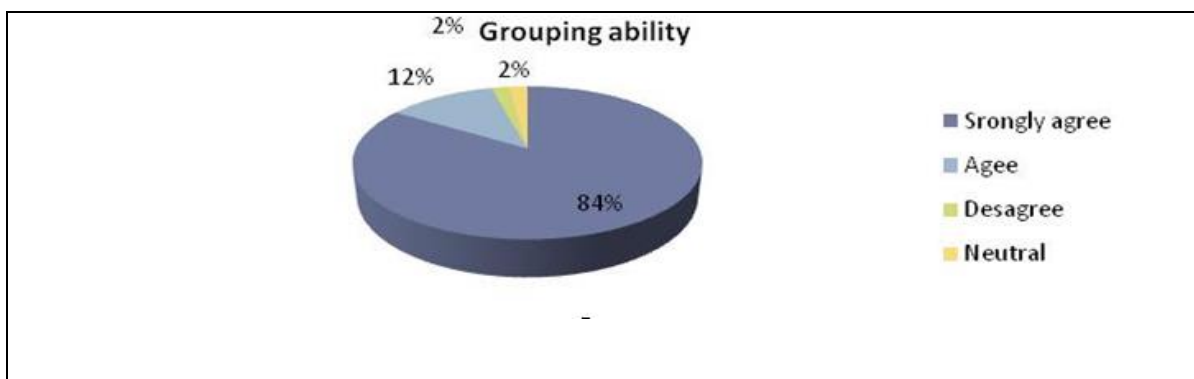
Fig. 3. Grouping abilities as a learning need

Respondents classified on a given scale, from 1 (strongly agree on training need) to 5 (disagreement regarding their training need), the following needs, hierarchically: *developing teaching design skills (lesson plans); creating an open attitude towards multigrade instruction; optimizing evaluative abilities and assessment tools; interpreting official curriculum as a personalized approach.*

A specific number of factors, mentioned in acknowledged research literature, can positively influence teachers' intrinsic motivation for programs dedicated to multigrade teaching. Among motivational sources identified by participants, 89 % from teachers mentioned that a reason is about *a real support for student's success* and an obvious *need for self development* (Figure 4). Another motivational factor is represented by teachers' wish to participate in the aims and goals of the entire school, as an organizing space for professional life, an aspect generally sustained by the principle of collaborative culture in schools. Here is how graphically presented respondents option for one of the training needs/objectives:

Fig. 4. Motivational factors

Teacher training activities are time-consuming; in conclusion, there is a lack of time for preparing especially for multigrade instruction situations. The lack of available funding for participation in such activities is prohibitive.

A frequently mentioned negative factor is the l*ack of educational resources (82 %)*, in order to support innovative teaching process. Internet access difficulty also generates vulnerabilities in managing activities, especially those developed with ICT support. This is an issue cited by 66% (strongly agree) of

the surveyed teachers.

In our N.A. research, teachers consulted a proposal for a future course centered on multigrade education, in order to use this needs in curriculum writing.
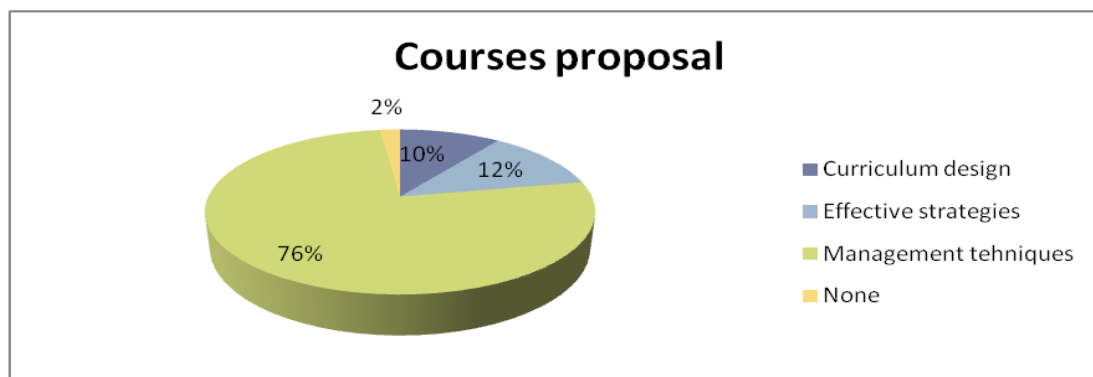

Fig.5. Curriculum selection

In a multigrade classroom, curriculum becomes a formal reference in applying differentiated scenarios of learning activities. Educational experts have designed a curriculum plan for teachers that will be offered in training program, as we see in the attached table:

Table 1. Curriculum proposal for a training program

Curricular approaches	**Effective strategies**	**Management techniques**
I. Difficulties and/ or opportunities of M.I. 1. Other educational experiences 2. The impact of M.I. Illustrative studies 3. Implications on teacher training II.1. Curricular adaptations 2. Instructional design of lessons 3. Differentiated instruction. 4. Teaching scenarios	III. Effective training practices 1. Age level characteristics 2. Active learning strategies a. Learning Project b. Learning problem c. Cooperative Learning. 3. Instructional strategies. Support for autonomy in learning experiences IV. Assessment Strategies: peer assessment, auto-evaluation, formative testing.	V. Management techniques in multigrade classes 1. Creating an efficient learning environment 2. Motivation. Principles and motivation techniques VI. Educational style and intervention strategies 1. Deviance in classroom 2. Efficient management strategies in multigrade classroom

Conclusion

Romanian teachers have a considerable experience generated by participation in many alternative training programs. Conventional format of continuous teacher training is considered conservative and unrealistic. Curriculum, in teachers' opinion, is unchanged for several years. In designing and implementing teacher education programs, we should consider new ways for preparing teachers to

manage a vast students' diversity characteristic in dramatic contexts, including outsized and undersized classes, especially in rural areas or in disadvantaged social groups.

A good education quality is able to guarantee the enormous, cognitive and social potential of multigrade instruction. Teacher is the main reference of learning quality in classroom. If such a high degree of accountability is to be given to teachers, it is important to be trained in a professional manner.

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