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## An Analysis of School Mathematics Textbooks in Terms of Their Pedagogical Orientation

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### *Abstract*

This study aims to analyse the content of school Mathematics textbooks, based on whether they are cross-thematic in character, or not. In other words, it examines the connection of the mathematics content to knowledges drawn from other school subjects, something that is promoted as much by the curricula of Greek compulsory education, as by the institutional agencies of the European Union, in their attempt to formulate community education policy for the shaping of school knowledge. More specifically, in this research school mathematics textbooks from two consecutive Greek school grades, in which the pupils are between 12 and 13 years old approximately, and which are linked to the transition from primary to secondary education, are examined. The content analysis method was used for the approach to the research material. The results of this study revealed that Greek school textbooks do, to a small extent, achieve the pedagogical goal of a cross-thematic approach to knowledge, linking mathematics to other subjects on the curricula of Greek compulsory education.

*Keywords:* mathematics education, mathematics textbooks, cross-thematic approach.

### 1. Introduction: The importance of school mathematics textbooks in teaching

School textbooks are fundamental in the shaping of the pedagogical framework of the teachers and the pupils (Lebrun et al., 2002). In their content, the recontextualization of the scientific knowledge of Mathematics takes place and this is adapted to the goals and pursuits of the official curriculum for pupils at particular educational levels and in particular school years, and is transformed into knowledge of the school science of Mathematics (Bernstein 2000; Morgan, Tsatsaroni & Lerman, 2002). Hence, school textbooks appear as “tools” for the pedagogical guidance of the teachers, for the shaping of their teaching and the promotion of the “teaching-learning” process in such a way as to be adapted to the age-related capabilities of the pupils in the particular grades they are designed for.

Basil Bernstein’s contribution to the theory for the analysis of the way in which the content of school textbooks is shaped, is significant, and our study makes especial use of the

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concept of classification (Bernstein, 1991; 2000). “Classification” refers to the way in which the contents of the curricula, and hence of school textbooks, are correlated. When the knowledge in the content of school mathematics textbooks comes strictly and exclusively from the scientific field of mathematics, then classification is strong. This is because during the creation of school mathematics knowledge, clear and distinct boundaries were implemented which make it clear that the content of the particular textbooks maintain “mathematical purity” and stands apart from the school knowledges of other subjects on the curriculum. When school mathematics textbooks use knowledges from other curriculum subjects, so that the mathematical knowledges are more easily comprehensible and more readily linked to the social reality and experiences of the pupils, then classification is weak (Bernstein, 1991; 2000). In this case a weakening of the boundaries between the various school subjects is preferred, and this occurs as much in the case of greek curricula as in the curricula in other European countries that formulate collection type curricula (Bernstein, 1991; Koustourakis, 2007; Ross, 2000). In other words, these are curricula based on the teaching of separate subjects, in contrast to the USA where syllabuses are formed “around courses as knowledge units” (Ross, 2000: 100). The selection of cross-thematic approaches for the shaping of school knowledge which is promoted by agencies of the European Union during the 21st century is linked to the implementation of weak classifications (Cedefop, 2008; Commission of the European Communities, 2000; European Council, 2009; The European Parliament and the Council of the European Union, 2006; Koustourakis, 2007). This is because inter-disciplinary approaches and a preference for the recontextualization of school knowledge is promoted, and this should combine cognitive data drawn from various scientific areas of a curriculum collection type (Bernstein, 1991, 2000; Zacharos, Koustourakis & Papadimitriou, 2014).

School textbooks implement the intended curriculum from the official education policy, transforming the teaching objectives and guidelines that are formulated there, into teaching content, in other words into a curriculum that can be enacted in the school classroom (Valverde et al., 2002; Ball, & Feiman-Nemser, 1988). More specifically, mathematics textbooks, as supplementary teaching material, have a long history and have existed since the age of ancient Greece with Euclid’s *The Elements* (Fan et al., 2013). Nevertheless, research on the contribution of mathematics textbooks to teaching and learning has only been identified in recent decades. Research shows that maths textbooks comprise the basic tool teachers use in their teaching (Schmidt et al., 1996; Roth McDuffie & Mather, 2007). They help the teachers determine the content that must be taught, they determine the pace and the timing of the teaching, recommend projects for the pupils and determine either directly or indirectly what is to be assessed (Koustourakis & Zacharos, 2011).

The intended curriculum is imprinted in the school textbooks, and transforms the teaching goals and instructions formulated in it, into teaching content, that is to say, into a curriculum that can be enacted in the classroom (Valverde et al., 2002). According to some researchers (for example, Schmidt et al., 1997: 178) school textbooks belong in the category of the potentially implemented curriculum because they contribute to the potential implementation of the mathematics curriculum and are used “as intermediaries in turning intentions into implementations”. This process is a form of recontextualization of school mathematics knowledge that is taught by teachers on the micro-level of their school classroom (Thompson, Senk & Johnson, 2012).

Research findings reveal that the dependence the teachers and pupils have on the mathematics textbook is more marked than the dependence on the textbooks for other subjects on the curriculum (Fan et al., 2013). The maths textbook is often the chief material the teachers base their teaching on (Grouws et al., 2004). And while the teachers, within the framework of the relative pedagogical autonomy they possess, can modify parts of the content of the textbook or the teaching strategies recommended within it, the majority of them see it as the chief expresser of the directives of the curriculum and tend to cling to it (Baker et al., 2010). In fact, it has been noted

that the use of different maths textbooks by teachers leads to the adoption of different teaching strategies (Fan & Kaeley, 2000). As emerges from the study of the content of maths textbooks, these convey pedagogical messages, which at times encourage, and at other times discourage, the realization of the curriculum (Fan, 2013).

The marked research interest in the multidimensional role of maths textbooks has led in recent decades to a host of research in which the investigation of the content of the textbooks has been studied as an independent variable (Valverde et al., 2002). According to Fan et al. (2013) the analysis of maths textbooks contains a wide range of research interests. We now quote some indicative examples of research orientations: some research attempts to trace the pedagogical intentions of maths textbooks, their structure and the maths objects from which they draw their particular content (see: Pepin & Haggarty, 2001; Pepin et al., 2013). Other research focuses on particular areas of maths, such as for example, the concepts of stochastic mathematics (Pickle, 2012), the concept of proportion (Dole & Shield, 2008), the manner of negotiating the concept of function (Mesa, 2004), on the degree of encouragement in the development of mathematical reasoning (Stylianides, 2009; Stacey & Vincent, 2009) and the way in which the issue of problem solving is negotiated (Fan & Zhu, 2000; Sun, 2011). There is a whole host of research concerned with the sociological frameworks and cultural viewpoints which are contained within the mathematics textbooks, as well as with the investigation of beliefs that are imprinted in their content, on the nature of mathematics and the manner of the formation of mathematical knowledge (see: Dowling, 1998, 2002; Koustourakis & Zacharos, 2011; Morgan et al., 2002). Other research concerns the use of textbooks in the classroom (Remillard, 2005; Zhu & Fan, 2002). In addition we encounter research which focuses on the comparative analysis of different maths textbooks from within the same country or from different countries with the objective of determining differences and similarities (see: Fan et al., 2013; Fan & Zhu, 2007; Pepin & Haggarty, 2001; Johansson, 2003; Valverde et al., 2002). More particularly, in Valverde et al.'s (2002) comparative study of school textbooks from a number of countries, problems in incorporating the recommended reforms into the maths textbooks were highlighted. In addition, in Fan and Zhu's (2007) multinational research, which focuses on problem solving, mismatches between the pedagogical aims of the curriculum and the school textbooks were found.

The aim of this study is the analysis of the content of mathematics textbooks for the sixth grade of Primary School and the first grade of Greek Junior High School (1), which were introduced in 2006 and 2007 respectively (2). The analysis criterion was the compatibility of the textbooks in question with the fundamental pedagogical principle, which is formulated in the contemporary cross-thematic curriculum of compulsory Greek education, which requires that the individual subjects of school science, such as Mathematics, should not be taught in isolation but that their syllabus should be linked to aspects of knowledge from other subjects on the curriculum (Ministry of National Education and Religious Affairs, 2003).

The cross-thematic approach to knowledge can often be found in educational reforms of the curricula in Europe, which is why the issue of the cross-thematic approach to school knowledge attracts the theoretical and research interest of a plethora of scientific papers (see: Boyle & Bragg, 2008; Harris & Grenfell, 2004; Oates, 2001; Pepin, Gueudet & Trouche, 2013; Reid & Scott, 2005; Ross, 2000; Whitty, Rowe & Aggleton, 1994). This paper endeavours to contribute to the international bibliography on the cross-thematic approach to school knowledge as it focuses on the way it is implemented in the case of Greece, through the subject of mathematics, which possesses high status on the curricula of Greek compulsory education (Koustourakis & Zacharos, 2011).

## 2. The cross-thematic framework

The school textbooks that are studied here set out the pedagogic principle of the reform of the curricula of Greek compulsory education at the beginning of the 21<sup>st</sup> century. The particular changes appear as the implementation of European Union decisions and it is believed that they contribute to the modernization and Europeanization of the content of Greek education (Alahiotis & Karatzia, 2006; Koustourakis, 2007; Koustourakis & Zacharos, 2011).

One outcome of contemporary educational reform was the publication of a new curriculum for Greek compulsory education (Primary Education and Junior High School) which bore the title cross-thematic approach or cross curriculum approach (Ministry of National Education and Religious Affairs, 2003) and led to the reshaping of the mathematics curricula too.

According to the Greek cross-thematic curriculum framework, the “cross-thematic approach” to school knowledge, which concerns the structuring of the content of the subjects to be taught, based on a horizontal and vertical distribution of the material to be taught, is sought. The horizontal dimension is related to the interlinking of the subject matter of the subjects that are taught in a class. The aim of the Greek cross-thematic approach is to “enable pupils to acquire a unified body of knowledge and skills, following a holistic approach to knowledge. This approach will allow them to form their own personal opinions on scientific issues that are closely interrelated and are also related with issues of everyday life” (Ministry of National Education and Religious Affairs, 2003: 18). For example, within the framework of cross-thematic teaching, during the teaching of mathematics, the linking of aspects of mathematical knowledge with knowledges from other areas of school science, such as science, history, etc., is proposed. According to Bernstein (2000), the aforementioned pedagogical orientation promotes a “weak classification”, in other words the weakening of the boundaries between the different subjects on the curriculum.

The vertical dimension is related to the smooth flow of knowledge from unit to unit and from class to class. We could claim that the cross-thematic approach is comprised of two components: the way school knowledge is organised, and the teaching approach to that knowledge (Ministry of National Education and Religious Affairs, 2003; Alahiotis & Karatzia-Stavlioti, 2006).

In conclusion, what is aimed at through the cross-thematic approach is the horizontal connection of school objects to fundamental concepts that are encountered in a number of school subjects within the same grade, and often their vertical connection with school subjects from different classes.

We should note that cross-thematic learning and teaching approaches comprise a contemporary pedagogical issue that places emphasis on cross-thematic approaches in learning and teaching. For example, according to Bjorklund, & Ahlskog-Bjorkman (2017: 99) “children need to be offered a relevance structure for their exploration of different phenomena. This relevance structure supports meaning-making, in that earlier experiences and present resources are joined together, which offers an opportunity to experience the phenomena in ways, not previously possible”. The cross-thematic approach integrates different areas, such as mathematics, science, geography, history, literacy, etc., something which provides the pupils with the opportunity to delve more deeply into the issues they are dealing with and to approach them in new ways.

Based on the aforementioned, for the purpose of the present research paper, we regarded the cross-thematic approach as the intentional pedagogical attempt to link Mathematics with other scientific areas of school knowledge that are taught in each school year. Based on this general pedagogical principle, in the school years 2006-2007 and 2007-2008 new school Mathematics textbooks for Primary and Secondary Education respectively were published, which are still in use today.



### 3. The research questions

In this paper we concern ourselves with the intended curriculum, as this is set out in the reformed curriculum and is particularised in the school textbooks, and not with the implemented curriculum, in other words the actual teaching practices that teachers develop in their classroom. As was mentioned previously, the aim of the present research is to investigate the extent to which the school textbooks that are used in the last year of Primary Education and the first year of Secondary Education set out the pedagogical framework of the cross-thematic approach.

More specifically, the research questions that we will attempt to investigate are the following:

- Are the pedagogical principles of the cross-thematic approach set out in the content of the Mathematics textbooks for the final year of Primary Education (sixth year of Primary School) and the first year of Secondary Education (first year of Junior High School)?
- Are there any differentiations of a qualitative or quantitative character in the content of the examined textbooks in terms of the cross-thematic approach? Here, two dimensions attracted our research interest: the potential differentiations during the transition from primary to secondary education, as well as the differentiations within each series of textbooks.

### 4. Methodology

#### 4.1 *Material for the collection of empirical data*

The material for the collection of our research data was the official Mathematics teaching material used by students in the two school grades being examined. This material, in the case of the last year of Primary Education consists of the student's textbook and four workbooks (volumes a,b,c, and d), while for the students in the first year of Secondary Education, there is only the student's textbook. For the analysis of the mathematics texts in question, the most recent editions of the books were used (Kassoti et al., 2014a, 2014b; Vandoulakis et al., 2012).

Our criteria for the choice of the particular textbooks was the fact that although they belong to different levels of education (Primary and Secondary), the school years to which they correspond are consecutive in the Greek education system and, in addition, much of the mathematical content that they contain is common to both years. Consequently, the particular choice affords the opportunity to investigate the second research question which investigates aspects of the transition from primary to secondary education and the highlighting of potential "gaps" between the two grades. This is because research on the transition from primary to secondary education often highlights a number of important changes in the learning environment between the two grades and this move from one school grade to the next resembles a move to a different "world" (Darragh, 2013).

#### 4.2 *Structure of the school textbooks*

The primary school textbook has the following structure: It is divided into "chapters", where each chapter corresponds to one teaching unit of two pages. For example, there is one chapter on natural numbers, another chapter on decimals and so on. Each chapter contains two "activities", which are carried out in class and two "applications" which are usually solved exercises which are dealt with either in the class or at home by the pupils. Finally, there is a unit entitled "Questions for self-assessment and discussion" which contains evaluation questions. The four volumes of workbooks contain exercises and "extension activities" which correspond to the

“chapters” in the textbook. It should be noted that it is in the “extension exercises” where the greatest number of cross-thematic activities are to be found.

Finally, the teaching units of the secondary school mathematics textbook contain two or three “activities” which are sometimes formal exercises and other times require a more investigative approach from the pupils. The activities are followed by a generalization with the setting out of rules and finally there are examples of solved exercises.

#### 4.3 Unit of analysis

The criteria, according to which the content analysis of the Mathematics textbooks was carried out, was their cross-thematic content. The school textbooks were analysed using the content analysis method taking the “sentence” as unit of analysis (Morais et al., 1999; Koustourakis & Zacharos, 2011; Zacharos, Koustourakis & Papadimitriou, 2014). Here the concept of “sentence” is not understood in terms of its grammatical content, but rather its semantic content. Hence, the sentence may be made up of an extract from a text which describes a complete teaching activity, which has a particular teaching objective. Consequently, the sentence can be a theory text, an activity for the students, a maths application, a maths exercise or a graph in the cases where this constitutes an autonomous teaching object.

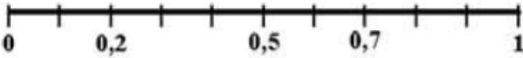
For example, in Figure 1 in the same activity there are three autonomous units of analysis. The first requires the children to colour in up to the point where the container fills up, the second requires them to match decimal numbers and fractions on a number line, while the third requires the formulating of a rule for converting decimal numbers into fractions.

**Δραστηριότητα 2η**

Για να φτιάξουν ένα γλυκό στο ολοήμερο τμήμα, τα παιδιά ζύγισαν 0,2 κιλά σοκολάτας. Κατόπιν έβαλαν να λιώσει σε ένα δοχείο / δοσομετρητή του 1 κιλού. Χρωματίστε το διπλανό σχήμα μέχρι την ένδειξη έως την οποία ανέβηκε η στάθμη της λιωμένης σοκολάτας.



- Τοποθετήστε τα κλάσματα των ενδείξεων του δοσομετρητή στην παρακάτω αριθμογραμμή.



- Διατυπώστε έναν κανόνα για τη μετατροπή δεκαδικών αριθμών σε δεκαδικά κλάσματα.

.....

.....



Figure 1. Three different “units” in the same activity (Kassoti et al., 2014b, student’s textbook, p. 13)

The activity mentions the following:

##### Activity 2

The children weighed 0.2 kilos of chocolate in order to make a sweet at school. They then melted it in a 1 kilo container/measuring jug. Colour the jug on the right up to the point reached by the melted chocolate.

- Place the fractions in the markings on the jug on the number line below.
- Formulate a rule for converting decimal numbers into fractions.

Then, the units of analysis were classified based on the following criteria:

The first criterion for classification was whether the sentence was cross-thematic, or not. Based on this criterion, the sentences – units were classified into those where the content was cross-thematic and those where it wasn't. In the case of the sentences that were classified as cross-thematic, the scientific object (or objects) involved in the sentences in question was determined.

The second criterion for classification was the mathematics textbook which contains the sentence in question. As has already been mentioned for Primary education we had the student's textbook and the workbooks a, b, c, and d, while for Secondary education, the student's textbook.

The third criterion was the thematic unit in which the content of the sentence was integrated. Here we distinguished the units: Numbers & Algebra, Geometry & Measurement, Stochastic Mathematics and Statistics.

Finally, the fourth criterion was the teaching position the chosen sentence occupies in the textbook. More specifically, according to the structure of the textbooks, the sentences can be integrated into the category of introductory activities, the section on theory and additional texts, the examples and applications, in the exercises and consolidation exercises.

Based on the previous criteria, the data was processed using the statistical software SPSS (version 22).

#### 4.4 Indicative examples of the sentence classification

The first example was drawn from the textbook for the final year of Primary Education (see Figure 2). This particular extract constitutes a "sentence", based on the definition we gave, since it constitutes an autonomous activity with a specific target. In addition, it could be characterised as cross-thematic because it is included in the teaching unit entitled "addition and subtraction" and apart from the inverse operations of addition and subtraction, provides an opportunity to make mention of concepts from physics as well as social concepts.

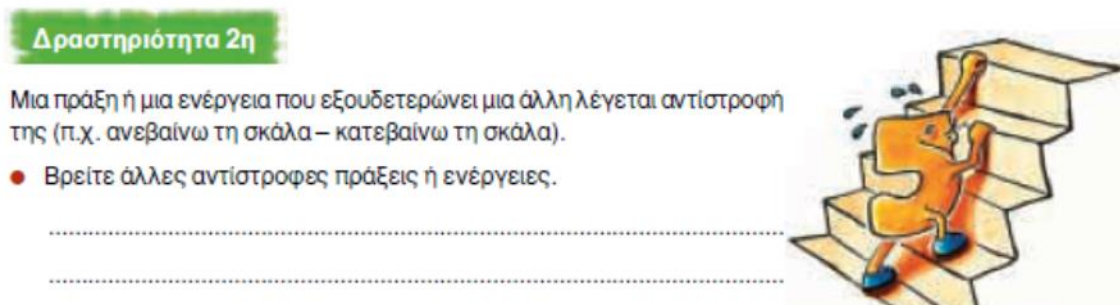


Figure 2. Example of a cross thematic sentence (Kassoti et al., 2014b, textbook, p. 17)

The activity-sentence mentions the following:

Activity 2

An act or an operation that cancels out another is called its inverse (e.g. I ascend the stairs – I descend the stairs).

- Find some other inverse operations.

The second example is a sentence from the student's textbook, also from the final year of Primary Education (see Figure 3). This sentence is characterised as non-cross-thematic, as it

has a purely mathematical content, which is integrated into the unit “Numbers – Algebra”. It is to be found in the textbook unit entitled “Solved examples and applications”, since it is an application concerning the execution of sums between natural and rational numbers.

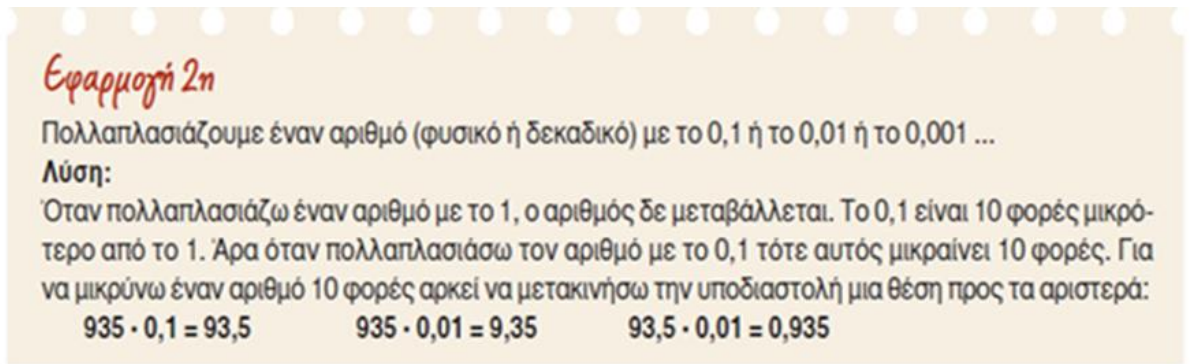


Figure 3. Example of a sentence with non-cross thematic content (Kassoti, et al., 2014a, p. 20)

The activity-sentence mentions the following:

2nd application

We multiply a number (natural or decimal) by 0.1 or 0.01 or 0.001 ...

Solution:

When I multiply a number by 1, the numbers remains the same. 0.1 is 10 times smaller than 1. So when I multiply the number by 0.1, then it becomes 10 times smaller. To make a number 10 times smaller I just need to move the decimal point one place to the left:

$$935 \times 0.1 = 93.5 \quad 935 \times 0.01 = 9.35 \quad 93.5 \times 0.01 = 0.935$$

In order to ensure reliability in the classification of the sentences, the sentences were classified by each of the four authors of the present research paper, working autonomously. The comparison of the final classifications by the four reviewers showed a convergence in at least 75% of the cases in each classification (Morais et al., 1999; Koustourakis & Zacharos, 2011). In cases where a sentence didn't present an acceptable convergence, it was omitted and not included in the material for this research.

## 5. Results

The presentation of the results from our study includes qualitative and quantitative investigation. In the qualitative investigation the framework for the recognition and classification of the sentences-units was used, which is described analytically in the section on methodology. For the quantitative analysis and the brief presentation of the research data, contingency tables were used. Finally, to check for differences in the two independent samples (school textbooks from Primary and Secondary Education) which is linked to the second research question, the statistical test chi-square was used.

### 5.1 Concerning the cross-thematic criterion

From the total number of 1860 mathematics sentences that were recorded, 1630 (87.63%) are not of a cross-thematic nature and 230 sentences (12.37%) are cross-thematic. More analytically, by school year (see Table 1): In the textbooks for year 6 of Primary School, a total of 946 sentences were recorded. Of these, 168 (17.76% of the total of the sentences for this class) have

cross-thematic content, while the remaining 778 (82.24%) are purely mathematical without cross-thematic characteristics. In the textbook for the first year of Secondary School, from a total of 914 sentences 62 (6.78%) are of a cross-thematic character, while the remaining 852 (93.22%) are purely mathematical.

Table 1. Frequencies of sentences in terms of their cross thematic content

	Non-cross thematic sentences	%	Cross thematic sentences	%	Total number of sentences	%
6 <sup>th</sup> of Primary School	778	82.24	168	17.76	946	100.00
1 <sup>st</sup> of Junior High School	852	93.22	62	6.78	914	100.00
Total	1630	87.63	230	12.37	1860	100.00

The data in Table 1 lead to the following conclusions: Despite the clearly stated intention of the curriculum for the teaching of mathematics within the framework of a cross-thematic teaching approach, the school textbooks meets this requirement to only a very small degree. In contrast, their authorship follows the conventional form of writing school textbooks where the content is purely mathematical. Consequently, in the content of the school textbooks examined, strong classification (Bernstein, 1991, 2000) of mathematical school knowledge predominates. A second finding is that the textbook for Mathematics in year six of Primary School is more adapted to the cross-thematic perspective than the textbook for the first year of Junior High School. More analytically, 17.7% of the sentences in year 6 of Primary School have a cross-thematic character, as opposed to 6.78% of sentences for the first year of Junior High School. This differentiation is statistically significant ( $\chi^2(1, N=1860)=51.676, p<0.001$ ). A further analysis of the school textbooks for year six of Primary School (Student's Book and Workbooks) revealed differentiations which are recorded in Table 2. More precisely, the workbooks embrace the cross-thematic spirit to a greater degree than the Student's Book. In fact, the differentiation is statistically significant ( $\chi^2(4, N=946)=30.100, p<0.001$ ).

Table 2. Frequencies of sentences in terms of their cross thematic content in the printed material for the sixth year of Primary School

Type of printed material	Non-cross thematic sentences	%	Cross thematic sentences	%	Total	%
Student's Book	437	86.71	67	13.29	504	100.00
Workbook-a	101	80.16	25	19.84	126	100.00
Workbook-b	96	79.34	25	20.66	121	100.00
Workbook-c	87	82.86	18	17.14	105	100.00
Workbook-d	57	63.33	33	36.67	90	100.00
Total	778	82.24	168	17.76	946	100.00

### 5.2 Scientific areas involved in the cross-thematic mathematical sentences

Regarding the scientific areas involved in the cross-thematic mathematical sentences, the following points were noted (see: Table 3):

In school textbooks for year 6 of Primary School, of the 168 mathematical sentences that are cross-thematic, 28 (16.67% of the cross-thematic sentences) are linked to issues from Geography, 11 (6.55%) to issues from Language, 46 (27.38%) from Art, 25 (14.88%) to issues from History, 11 (6.55%) to the subject Social and Political Education (SPE), 10 (5.95%) to Physical

Education and 37 (22.02%) to the subject of Physics. Setting the contribution of the scientific fields in cross-thematic mathematics sentences hierarchically, we see that the first place is occupied by the subject of Art followed by Physics.

In the school textbook for the first year of Gymnasium, of the 62 cross-thematic mathematics sentences, 6 (9.68% of the total number of cross-thematic sentences) were related to the subject of Geography, 6 (9.68%) to the subject of Language, 17 (27.42%) to Art, 25 (40.32%) to History, 1 (1.61%) to Music, 6 (9.68%) to Physics and 1 (a percentage of 1.61%) to Biology.

Table 3. Scientific objects which appear in the cross thematic mathematical sentences in the textbooks for the sixth year of Primary School and the first year of Junior High School

Subject	Sixth Year of Primary School		First year of Junior High School		Total	
	Non-cross thematic sentences	%	Cross thematic sentences	%	Total	%
Geography	28	16.67	6	9.68	34	14.78
Language	11	6.55	6	9.68	17	7.39
Art	46	27.38	17	27.42	63	27.39
History	25	14.88	25	40.32	50	21.74
Social & Political Education	11	6.55	*	*	11	4.78
Music	*	*	1	1.61	1	0.43
Physical Education	10	5.95	0	0.00	10	4.35
Physics	37	22.02	6	9.68	43	18.70
Biology	*	*	1	1.61	1	0.43
Total	168	100.00	62	100.00	230	99.99

Note: The fields marked with an asterisk (\*) denote that the corresponding subject is not taught.

It should be noted that only seven mathematics sentences (three from the textbook for the first year of Junior High School and four from the final year of Primary School) are linked to more than one scientific object. To be precise, in one mathematical sentence, issues from Physics and History are involved, in one issues from Language and Physics, in one issues from Geography and Social & Political Education, in one issues from Physics and Art, in one issues from History and Music, in one issues from Physics and Biology and finally in another, issues from History and Art.

### 5.3 Cross-thematic sentences by themed units

Regarding the cross-thematic nature of sentences by themed unit in the content of the textbooks under examination, the following was ascertained:

In the printed material for year 6 of Primary School (see Table 4), in the themed unit “Numbers-Algebra”, out of a total of 651 sentences, 95 (14.59%) were cross-thematic, in the unit “Geometry-Measuring” out of a total of 252, 60 (23.81%) were cross-thematic and in the unit “Stochastic Mathematics-Statistics”, out of a total of 42 sentences, 13 (30.23%) were cross-thematic. Here the qualitative findings show that the themed unit “Stochastic Mathematics – Statistics” is the one with the most strongly cross-thematic character, in fact with a statistically significant difference as against the other units ( $\chi^2(2, N=43)=15.365, p<0.001$ ).

Table 4. Frequencies of sentences in terms of their cross thematic content in the printed material for year 6 of Primary School, by themed unit

Themed Unit	Non-cross thematic sentences	%	Cross thematic sentences	%	Total	%
Numbers-Algebra	556	85.41	95	14.59	651	100.00
Geometry-Measuring	192	76.19	60	23.81	252	100.00
Stochastic Mathematics-Statistics	30	69.77	13	30.23	43	100.00

In the student's book for the first year of Junior High School, the corresponding findings are recorded in Table 5. Here, as we mentioned previously, there are few cross-thematic sentences out of the total number of sentences, with the themed unit "Geometry-Measuring" displaying the strongest cross-thematic character. Nevertheless, the difference in the cross-thematic character of this unit as against the other themed units is not statistically significant ( $\chi^2(1, N=914)=2.300, p>0.05$ ). This is because in the content of the textbook for the first year of Junior High School, strong classification of school mathematical knowledge predominates (Bernstein, 2000).

Table 5. Frequencies of sentences in terms of their cross thematic content in the student's book for the first year of Junior High School, by themed unit

Themed Unit	Non-cross thematic sentences	%	Cross thematic sentences	%	Total	%
Numbers-Algebra	549	94.17	34	5.83	583	100.00
Geometry-Measuring	303	91.54	28	8.46	331	100.00
Stochastic Mathematics-Statistics	*	*	*	*	*	*
Total	852	93.22	62	6.78	914	100.00

#### 5.4 Cross-thematic mathematics sentences by teaching position

As far as the teaching position of the cross-thematic mathematics sentences is concerned, in other words the position in which the sentences are placed according to the structure of each chapter, the following was discovered: In textbooks for the first year of Primary School, we noticed that the majority of cross-thematic sentences were located in the section on "Introductory activities" (see Table 6). Indeed, this differentiation in the concentration of sentences is statistically significant ( $\chi^2(3, N=946)=41.820, p<0.001$ ).

Table 6. Positioning of sentences in textbooks for the sixth year of Primary School

Teaching position	Non-cross thematic sentences	%	Cross thematic sentences	%	Total	%
Introductory activity on mathematical concepts	90	65.22	48	34.78	138	100.00
Theory and supplementary texts	77	90.59	8	9.41	85	100.00
Solved examples and applications	113	93.39	8	6.61	121	100.00
Exercises and practice activities	498	82.72	104	17.28	602	100.00
Total	778	82.24	168	17.76	946	100.00

In the school textbook for the first year of Junior High School, the majority of cross-thematic sentences are to be found in the section of supplementary texts (see Table 7). And in this case the differentiation in the concentration of cross-thematic sentences is statistically significant ( $\chi^2(3, N=914)=33.800, p<0.001$ ).

Table 7. positioning of sentences in textbooks for the first year of Junior High School

Teaching position	Non-cross thematic	%	Cross thematic	%	Total	%
Introductory activity on Mathematical concepts	89	93.68	6	6.32	95	100.00
Theory & additional texts	122	82.43	26	17.57	148	100.00
Solved examples & applications	155	93.94	10	6.06	165	100.00
Exercises and practice activities	486	96.05	20	3.95	506	100.00
Total	852	93.22	62	6.78	914	100.00

## 6. Conclusion and discussion

In this research, content analysis of Greek Primary and Secondary Education school mathematics textbooks was attempted. More precisely, we analysed school mathematics textbooks for the final year of Primary Education (year 6 of Primary School) and the first year of Secondary Education (year 1 of Junior High School). Our research interest focused on the degree of compatibility of the pedagogical content of school textbooks with the objectives of the curriculum for the teaching of mathematics, which sets the cross-thematic approach as a central direction for teaching. Consequently, the criterion for the analysis of mathematics texts was the extent to which they set out the principles of the cross-thematic approach, contributing to the weakening of the boundaries between the subjects of the curriculum and linking school mathematics knowledge to knowledge of specific subjects.

Regarding the first research question, the findings show that the school textbooks, which were the object of the research, are written in a rather conventional way, as the majority of the sentences-units of analysis which were recorded (87.63% of the total number of sentences) are not of a cross-thematic character. In other words, the school textbooks in question mainly present a purely mathematical content (according to Bernstein “strong classification”) and only partially involve topics from other subjects in their material, despite the fact that the declared intention of the curriculum is the coupling of mathematics with other scientific fields.

In the sentences with a cross-thematic character, mathematics is mainly coupled with one subject of the curriculum for the teaching year. Very few sentences connect more than two subjects of the curriculum.

With regards to the first aspect of the second research question, that is to say, the differentiations during the transition from primary to secondary school, a differentiation (statistically significant) was found between the printed educational material of the two school years in terms of their cross-thematic character: the cross-thematic approach is more marked in the last year of Primary School (17.76% of the total number of units-sentences for the school year) than in the first year of Secondary Education (6.78% of the total number of units-sentences of the class). This fact allows us to point out a form of “inconsistence” in the transition from one school year to the next as indicated in the relevant research (e.g. Darragh, 2013). In the writing of school mathematics textbook for the first year of Junior High School, the existence of “strong classification” (Bernstein, 1996, 2000) of the scientific object of Mathematics in relation to other scientific areas, is clearly evident.

With regards to the second aspect of the research question, in other words, the differentiations within each textbook module, the unit of school mathematics for the sixth year of



Primary School where the cross-thematic approach is most apparent is the unit on Stochastic Mathematics and Statistics, while the corresponding unit for the first year of Junior High School is the unit “Geometry – Measuring”. In the case of Stochastic Mathematics and Statistics the framework for the introduction and development of the concepts is drawn from examples from everyday life or from other scientific areas (like Biology).

The greatest percentage of cross-thematic activities are to be found in the introductory activities, which every teaching unit of the textbook for sixth year of Primary School contains, as compared with other sections of the textbooks. This fact probably manifests the intention of the textbooks’ writers to introduce new mathematical concepts by linking them to knowledge the students possess from their experience or from the teaching of other subjects on the curriculum. These introductory activities are usually approached through constructivist teaching practices, which require investigative self-activation and cooperation on the part of the students. However, in order to be able to carry out open activities of this type, sufficient teaching time is required, time which is not available due to the stiflingly intense teaching pace of the mass of the curriculum. This is the reason why teachers in Primary Education often treat these particular activities with a conventional teacher-centred manner of approach, which reduces the amount of time students are required to spend on the activity. We should note that in Valverde et al.’s (2002: 67) comparative study of school mathematics textbooks from a number of countries, in the few cases of textbooks that incorporated “multiple topic themes” these are introductory and then “the rest of the book progresses with a succession of single-topic themes”.

In school mathematics textbook for the first year of Junior High School, most cross-thematic sentences are located mainly in inserted texts (in boxes) with historical information on mathematical concepts which are to be taught. The usual practice of teachers, who teach mathematics in the first year of Junior High School, is to encourage the students to read the information in the boxes at home, alone, as these rarely constitute the object of a collective teaching approach in class.

In school mathematics textbook for the first year of Junior High School, most cross-thematic sentences are located mainly in inserted texts (in boxes) with historical information on mathematical concepts which are to be taught. Such is the case in Figure 4, which is to be found in the unit entitled “Natural numbers”. The usual practice of teachers who teach mathematics in the first year of High School, is to encourage the students to read the information in the boxes at home, as these rarely constitute the object of a collective teaching approach in class.

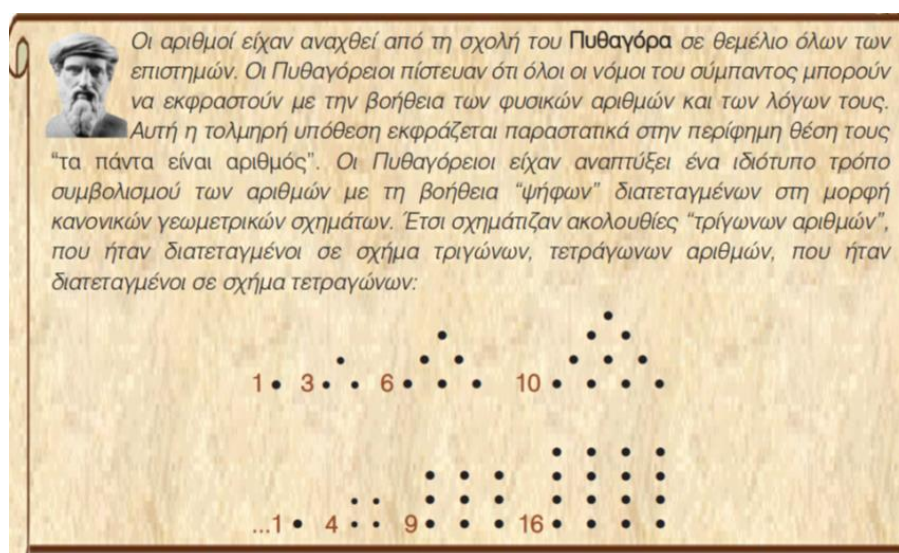


Figure 4. Example of a historical insert (Vandoulakis et al., 2012, p. 121).

Note: this particular insert refers to the school of Pythagoras and the formation of “triangular” and “square” numbers.

In conclusion, as is highlighted in Valverde et al.’s (2002: 161) research too, the proposed reforms are often not widely incorporated into the school textbooks. In addition, the answer to how “they bridge the chasm between the intentions of curricular policies and the realities of classroom implementations – is no simple matter”.

Indeed, as the findings of the present research show, the transition process from the field of policy design and the implementation of pedagogical approaches, to the creation of suitable educational material, in which the pedagogical principles in question are adopted, such as the school textbooks, is not a linear or self-evident process. This research shows that during the process of the reshaping of the principles of the official curriculum into the contents of mathematics school knowledge significant adaptations and “distortions” take place. This fact points to the existence of inherent weaknesses in the design of the curriculum and the writing of school textbooks, which often do not take into account important parameters of the educational act, such as the stifling framework which is determined for the teaching of mathematics. This framework defines in detail exactly what is to be taught and how much time is to be spent on each particular unit while it doesn’t take into account the “inertia” of the school institution to assimilate the changes, which is often due to a lack of suitable preparation of those involved with education (school textbook authors, teachers and others).

Coming to the end of this paper, we would like to highlight the importance of the elaboration of comparative research on school textbooks in European countries where pedagogies that encourage a cross-thematic approach are promoted in the curricula. This is because the cross-thematic principle seems to constitute a central point for the promotion of the aim of the creation of a European community of knowledge (Commission of the European Communities, 2000; European Council, 2009; The European Parliament and the Council of the European Union, 2006).

#### Notes

(1) In the Greek education system, Primary Education lasts six years and the final year (ST’ Dimotikou in Greek) is made up of pupils aged approximately 11-12. The first stage of Secondary Education lasts for three years and the first year of this level (A’ Gymnasiou in Greek) is made up of pupils aged approximately 12-13.

(2) In the Greek educational system, textbooks are proposed by the Institute of Education, an agency under the supervision of the Ministry of Education, and are the same for all schools.

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## References

- Alahiotis, S. N., & Karatzia-Stavlioti, E. (2006). Effective curriculum policy and cross-curricularity: Analysis of the new curriculum design of the Hellenic Pedagogical Institute. *Pedagogy, Culture and Society, 14*(2), 119-147. DOI: 10.1080/14681360600738277.
- Baker, D., Knipe, H., Collins, J., Leon, J., Cummings, E., Blair, C., & Gamson, D. (2010). One hundred years of elementary school mathematics in the United States: A content analysis and cognitive assessment of textbooks from 1900 to 2000, *Journal for Research in Mathematics Education, 41*(4), 383-423.
- Ball, D. L., & Feiman-Nemser, S. (1988). Using textbooks and teachers' guides: A dilemma for beginning teachers and teacher educators. *Curriculum Inquiry, 18*(4), 401-423.
- Bernstein, B. (1991). *Pedagogic codes and social control*. Athens: Alexandria (in Greek).
- Bernstein, B. (2000) *Pedagogy, symbolic control and identity. Theory, research, critique* (Revised Edition). Lanham, Rowman & Littlefield Publishers Inc.
- Björklund, C., & Ahlskog-Björkman, E. (2017). Approaches to teaching in thematic work: early childhood teachers' integration of mathematics and art. *International Journal of Early Years Education, 25*(2), 98-111.
- Boyle, B., & Bragg, J. (2008). Making primary connections: The cross-curriculum story. *The Curriculum Journal, 19*(1), 5-21.
- Cedefop (2008). *Terminology of European education and training policy – A selection of 100 key terms*. Luxembourg: Office for Official Publications of the European Communities.
- Commission of the European Communities (2000). *Designing tomorrow's education promoting innovation with New Technologies*. COM(2000) 23 final. Brussels, 27-1-2000.
- Darragh, L. (2013). Constructing confidence and identities of belonging in mathematics at the transition to secondary school. *Research in Mathematics Education, 15*(3), 215-229.
- Dole, S., & Shield, M. J. (2008) The capacity of two Australian eighth-grade textbooks for promoting proportional reasoning. *Research in Mathematics Education, 10*(1), 19-35.
- Dowling, P. (1998). *The Sociology of mathematics education. Mathematical myths/Pedagogic Texts*. London: Falmer Press.
- Dowling, P. (2002). Reading mathematics texts. In P. Gates (Ed.), *Issues in Mathematics Teaching* (180-196). London: Routledge.
- European Council (2009). *Strategic framework for European cooperation in education and training* (ET 2020). Conclusions of 12 May 2009a. (Official Journal, C 119, 28/5/2009).
- Fan, L. (2013). Textbook research as scientific research: towards a common ground on issues and methods of research on mathematics textbooks. *ZDM: The International Journal on Mathematics Education, 45*(3), 765-777.
- Fan, L., & Kaeley, G. S. (2000). The influence of textbooks on teaching strategies: An empirical study. *Mid-Western Educational Researcher, 13*(4), 2-9.
- Fan, L., & Zhu, Y. (2000). Problem solving in Singaporean secondary mathematics textbooks. *The Mathematics Educator, 5*(1/2), 117-141.
- Fan, L., & Zhu, Y. (2007). Representation of problem-solving procedures: A comparative look at China, Singapore, and US mathematics textbooks. *Educational Studies in Mathematics, 66*(1), 61-75.

- Fan, L., Zhu, Y. & Miao, Z. (2013). Textbook research in mathematics education: development status and directions. *ZDM: The International Journal on Mathematics Education*, 45(5), 633-646.
- Grouws, D. A., Smith, M. S., & Sztajn, P. (2004). The preparation and teaching practices of U.S. mathematics teachers: Grades 4 and 8. In P. Kloosterman, & F. K. Lester (Eds.), *Results and interpretations of the 1990 through 2000 mathematics assessments of the National Assessment of Educational Progress* (221-269). Reston, VA: National Council of Teachers of Mathematics.
- Harris, V., & Grenfell, M. (2004). Language-learning strategies: A case for cross-curricular collaboration, *Language Awareness*, 13(2), 116-130.
- Johansson, M. (2003). *Textbooks in mathematics education: A study of textbooks as the potentially implemented curriculum* (Licentiate thesis). (Lule: Department of Mathematics, Lule, University of Technology).
- Kassoti, O., Kliapis, P., & Oikonomou, Th. (2014a). *Mathematics for the 6th grade. Student's Book*. OEDV: Athens (in Greek).
- Kassoti, O., Kliapis, P., & Oikonomou, Th. (2014b). *Mathematics for the 6th Grade. Student's workbook a, b, c, & d*. OEDV: Athens (in Greek).
- Koustourakis, G. (2007). The new educational policy for the reform of the curriculum and the change of school knowledge in the case of Greek compulsory education. *International Studies in Sociology of Education*, 17(1/2), 131-146.
- Koustourakis, G. (2012). A sociological approach of the art curriculum in Greek primary education: The subject's social status in the intended and implemented curriculum. *The International Journal of the Arts in Society*, 6(6), 31-41.
- Koustourakis, G., & Zacharos, K. (2011). Changes in school mathematics knowledge in Greece: A Bernsteinian analysis. *British Journal of Sociology of Education*, 32(3), 369-387.
- Mesa, V. (2004). Characterizing practices associated with functions in middle school textbooks: An empirical approach. *Educational Studies in Mathematics*, 56, 255-286.
- Ministry of National Education and Religious Affairs (2003). *A Cross-thematic curriculum framework for compulsory education*. Government Paper 303 & 304/13-3-2003 ([http://www.pi-schools.gr/download/programs/depps/english/3rd\\_b.pdf](http://www.pi-schools.gr/download/programs/depps/english/3rd_b.pdf)).
- Morais, A. M., Neves, I. P., & Fontinas, F. (1999). Is there any change in science educational reforms? A sociological study of theories of instruction. *British Journal of Sociology of Education*, 20(1), 37-53.
- Morgan, C., Tsatsaroni, A., & Lerman, S. (2002). Mathematics teacher's positions and practices in discourses of assessment. *British Journal of Sociology of Education*, 23(3), 445-461.
- Oates, T. (2011). Could do better: Using international comparisons to refine the National Curriculum in England. *Curriculum Journal*, 22(2), 121-150.
- Pepin, B., & Haggarty, L. (2001). Mathematics textbooks and their use in English, French and German classrooms: A way to understand teaching and learning cultures. *Zentralblatt for the Didactics of Mathematics*, 33(5), 158-175.
- Pepin, B., Gueudet, G., & Trouche, L. (2013). Investigating textbooks as crucial interfaces between culture, policy and teacher curricular practice: Two contrasted case studies in France and Norway. *ZDM, The International Journal on Mathematics Education*, 45(5), 685-698.
- Pickle, M. C. C. (2012). *Statistical content in middle grades mathematics textbooks*. USA, University of South Florida. (Unpublished doctoral dissertation).
- Reid, A., & Scott, W. (2005). Cross-curricularity in the national curriculum: Reflections on metaphor and pedagogy in citizenship education through school geography. *Pedagogy, Culture and Society*, 13(2), 181-204.

- Remillard, J. T. (2005). Examining key concepts in research on teachers' use of mathematics curricula. *Review of Educational Research, 75*(2), 211-246.
- Ross, A. (2000). *Curriculum. Construction and critique*. London and New York: Falmer Press.
- Roth McDuffie, A., & Mather, M., (2007). Reification of instructional materials as part of the process of developing problem-based practices in mathematics education. *Teachers & Teaching: Theory & Practice, 12*(4), 435-459.
- Schmidt, W. H., Jorde, D., Cogan, L. S., Barrier, E., Gonzalo, I., Moser, U., Shimizu, K., Sawada, T., Valverde, G., McKnight, C., Prawat, R., Wiley, D. E., Raizen, S., Britton, E. D., & Wolfe, R. G. (1996). *Characterizing pedagogical flow: An investigation of mathematics and science teaching in six countries*. Dordrecht: Kluwer.
- Schmidt, W. H., McKnight, C. C., Valverde, G. A., Houang, R. T., & Wiley, D. E. (1997). *Many visions, many aims: A cross-national investigation of curricular intentions in school mathematics* (Vol. 1). Dordrecht: The Netherlands: Kluwer.
- Stacey, K. & Vincent, J. (2009). Modes of reasoning in explanations in Australian eighth-grade mathematics textbooks. *Educational Studies in Mathematics, 72*(3), 271-288.
- Stylianides, G. J. (2009). Reasoning-and-proving in school mathematics textbooks. *Mathematical Thinking and Learning, 11*(4), 258-288.
- Sun, X. (2011). "Variation problems" and their roles in the topic of fraction division in Chinese mathematics textbook examples. *Educational Studies in Mathematics, 76*(1), 65-85.
- The European Parliament and the Council of the European Union (2006). *Recommendations of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning* (2006/962/EC) (Official Journal of the European Union. 30.12.2006).
- Thompson, D. R, Senk, S. L., & Johnson, J. (2012). Opportunities to learn reasoning and proof in high school mathematics textbooks. *Journal for Research in Mathematics Education, 43*(3), 253-295.
- Valverde, G. A., Bianchi, L. J., Wolfe, R. G., Schmidt, W. H., & Houang, R. T. (2002). *According to the book: Using TIMSS to investigate the translation of policy into practice through the world of textbooks*. Dordrecht, Netherlands: Kluwer.
- Vandoulakis, I., Kalligas, Ch., Markakis, N., & Ferentinos, Sp. (2012). *Mathematics for the 1st grade of gymnasium. Student's Book*. OEDV: Athens (In Greek).
- Whitty, G., Rowe, G., & Aggleton, P. (1994). Discourse in cross-curricular contexts: Limits to empowerment. *International Studies in Sociology of Education, 4*(1), 25-42.
- Zacharos, K., Koustourakis, G., & Papadimitriou, K. (2014). Analysing the implemented curriculum of Mathematics in Preschool Education. *Mathematics Education Research Journal, 26*(2), 151-167.
- Zhu, Y., & Fan, L. (2002). Textbook use by Singaporean mathematics teachers at lower secondary level. In: D. Edge, & Y. B. Har (Eds.) *Mathematics education for a knowledge-based era, Vol. 2* (pp. 194-201). Singapore: AME.





# Factors Influencing the Formation of the Educational Choices of Individuals of Different Social Origin: A Review of Recent Sociological Scientific Literature

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## *Abstract*

The social and cultural origins of students' families contribute to the formation of the students' own culture through the accumulation and engraving of a system of predispositions that influence their educational success. The purpose of this study, which focuses on a review of recent sociological literature, is to explore and highlight the factors that define the choices of individuals from different social backgrounds regarding their educational future. The analysis of the research findings of the relevant scientific papers highlights the impact of socio-economic and cultural factors on the shaping of the educational choices of individuals of different social origin, bringing at the same time to the fore issues of social and educational inequalities. In particular, the social class of origin of young people, which produces its own class dispositions, the family habitus, the volume of cultural, social and economic capital that the student's family possesses, as well as the way in which teachers, who also have their own system of predispositions within the educational institutions where they work, approach young people of different social origin tend to make a significant contribution to the choices that define the educational paths of young people.

**Keywords:** social origin, habitus, cultural capital, social capital, economic capital, educational choices of young people.

## 1. Introduction

The impact of socio-economic and demographic factors and various forms of “capital” on the educational aspirations and choices of members of families of diverse national, social and cultural origins has garnered interest in a large number of scientific papers in the context of a review of Greek and international scientific literature (see: Andres & Looker, 2001; Archer, 2002; Archer, Halsall, & Hollingworth, 2007; Baker & Brown, 2007; Ball, Reay & David, 2002; Chakhaia, Andguladze, Janelidze & Pruidze, 2014; David, Ball, Davies & Reay, 2003; Devine, 2009; Gil-

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Flores, Padilla-Carmona, & Suárez-Ortega, 2011; Koustourakis, Asimaki, & Spiliopoulou, 2016a; Koustourakis, Spiliopoulou, & Asimaki, 2016b).

In the context of a sociological approach, Bourdieu points out the influence of habitus on the choices of social subjects and the attainment of their goals, arguing that this is “a system of lasting, transposable predispositions that unifies past experiences, functions at every moment as a matrix of perceptions, makes it possible to achieve various tasks” (Bourdieu, 1977: 83). Habitus is thus developed through the accumulation of experiences, and influences the social subjects’ decision-making processes and choices (Bourdieu, 1977, 1979).

The purpose of this paper, which focuses on a review of recent sociological scientific literature, is to explore and highlight the factors that define the choices of people from different social backgrounds concerning their educational future.

The content of this work, following the section on the theoretical notes, is shaped by the categorization of the review of the scientific literature into specific sections based on the thematic content of the relevant research studies. In each thematic category, there is a brief presentation of the findings of some representative works that illustrate the findings in these areas. This work closes with the concluding observations.

## 2. Theoretical notes

Cultural capital includes a wide range of habits, skills and attitudes that the individual accumulates from his/her family of origin during his/her primary socialization process (Bourdieu, 1979). In fact, Bourdieu distinguishes three forms of cultural capital (1986, 1994): the engendered (embodied) form - habitus, the objective form (cultural goods which are visible and transmissible to inheritors) and the institutionalized form, in the shape of educational titles (educational qualifications which are legalized through credentials: a form of objectification).

Habitus, the integration of social structures, unconsciously influences the thoughts and practices of individuals within the social world in which they live (Bourdieu, 1990; Smith & Tinning, 2011: 237). It offers a “window” to the world – “it is the product of history that produces individual and collective practices... It is embodied history, internalized as second nature and so forgotten as history – the active presence of the past of which it is the product” (Bourdieu, 1990: 56; Bourdieu, 2006: 90-91, 94; Kloot, 2009: 473). It also produces practices that are determined by the objective conditions of the existence of the social subjects that carry it, but it can, depending on the circumstances, display a series of “inventions” and be innovative (Asimaki & Koustourakis, 2014: 126; Corcuff, 2007: 29). In this sense, the concept of habitus is productive and conflicts with the concept of habit (habitude) which is mechanical, reproductive and includes the elements of repeatability and automation (Accardo & Corcuff, 1986: 69; Asimaki & Koustourakis, 2014: 126).

The primary habitus formed in early childhood within the family environment is the basis of the constitution of each subsequent habitus. However, the next set of habitus, namely the secondary, are centered on the primary habitus. Thus, each new acquisition fits into the logic of an existing habitus that is restructured into a single but enriched one that is constantly adapting to the necessities and challenges of new, unexpected and changing situations. Namely, habitus is an internalized structure that is in a process of continuous restructuring. In this respect, secondary habitus such as those that are formed in the school, the working environment, the varied social experience and which are introduced into the primary one do not completely eliminate it (Accardo, 1991: 91-92; Bourdieu, 1979: 58; Bourdieu & Passeron, 1970: 58).

It can therefore be argued that the teachers’ habitus is constantly being restructured as it is subject to new life experiences (Accardo, 1991; Bourdieu & Wacquant, 1992) in relation to the changing position they occupy in the social field (Laberge, 1995). Bourdieu underlines the



importance of school habitus. He believes that education offers a grid of homotropic predispositions for the individual to integrate, which then function as “unconscious” principles of action, perception, appreciation – assessment or reaction (Accardo, 1991: 86; Bourdieu, 1987: 76).

This particular French Sociologist also talks about the link between habitus and the individual’s social class. The class habitus is the common denominator in the different practices of an individual act, but also the ‘common matrix’ of the practices of all those who have lived in the same or similar conditions of being within the social sphere (Accardo, 1991: 95-99; Bourdieu, 2006: 99). Social classes produce their own habitus and are reproduced by it (but not mechanistically) (Milonas, n.d.: 215; Milonas, 1995: 79).

Economic capital is a source ‘directly and immediately convertible into money’ (Bourdieu, 1986: 243). It contributes to the enhancement of the educational success of children either through direct investment (e.g., enrollment in prestigious educational institutions) or indirect investment (e.g., financial aid to children during their studies) (Jæger, 2007: 532).

According to the definition given by Bourdieu, social capital is ‘the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition’ (1986: 248). The volume of social capital that the social subject possesses is a function of the extent of the network of links that he is able to activate, but also of the volume of capital the person acquires from those individuals to which he is linked (Bourdieu, 1994: 92-93).

Social capital is transferred primarily through the family. According to Bourdieu, there is a link between social capital and the ‘dominant’ social class. Indeed, this capital helps privileged social strata to benefit economically in the labor market thanks to the school titles they hold. However, this cannot be achieved by individuals of non-privileged social strata with similar titles, because the value of the title is inherent in the socio-economic value of the holder (Bourdieu, 1994: 92-93; Patereka, 1986: 52).

The school favors and supports people in the ‘dominant’ social class, as they already have the cultural resources required by the educational process, while it reinforces the social disadvantages of the non-socially favored. The culture of the bourgeoisie is closer to the culture of the school, and it is difficult for a child of working-class origin to adopt it, as the culture of the school is unfamiliar to the family environment in which the working-class child grew up. This child can only acquire, through arduous effort, the taste, style, spirit and *savoir-vivre* that are ‘natural’ elements of the culture of the ‘cultivated’ social class and which the school calls for and legitimizes. The ability of a child to meet the demands of education is a direct function of the culture or otherwise of the cultural capital transferred to him/her by his/her family (Bourdieu & Passeron, 1996: 76-78; Milonas, n.d.: 213).

The most socially privileged have the ability to transfer and legitimize the ‘dominant’ culture, thus maintaining their advantageous position vis-à-vis the non-privileged individuals who do not have the same resources and the same opportunities to acquire the ‘legitimate’ cultural capital. Educational action within the school transfers the ‘dominant’ culture and contributes to the reproduction of the structure of power relations within society (Bourdieu & Passeron, 1990; Azaola, 2012: 83).

### 3. The impact of social origin on the choice of studies in higher education

Recent sociological studies have shown that despite the increasing number of young people gaining access to higher education, the distribution of the student population is unequal, favoring individuals from the privileged social strata (see: Ball, Davies, David & Reay, 2002; Iannelli, 2007; Kyridis, 2015; Machin & Vignoles, 2004; Sianou-Kyrgiou, 2006, 2008, 2010;

Thompson, 2009; Whelan & Hannan, 1999). It therefore appears that under-representation of young people from less favored social backgrounds in higher education in countries with high social stratification, such as the United Kingdom and the United States, is an ongoing reality. In this respect, increasing access to higher education tends to favor students from already well-off socio-economic and cultural environments (see: Crozier, Reay, Clayton, Colliander, & Grinstead, 2008; Goldrick-Rab, 2006; Metcalf, 1997; Pugsley, 1998; Reay, 1998; Reay, David, & Ball, 2001, 2005; Wakeling, 2005; Waters & Brooks, 2010; Watson, 2013).

Characteristically, the findings of Wakeling's (2005) study conducted in the UK during 1999-2000 showed that students belonging to privileged social classes continued to attend higher education at a higher rate than working-class students. There is also a variation in the students' choice depending on their social background, regarding universities with a higher social standing. It should be noted that in England the greatest social prestige is bestowed on universities with a longer history as compared to newer universities. People from privileged social strata mainly studied in older and more historic universities and they continued their studies at postgraduate level with great ease because they believed they had acquired high educational qualifications during their undergraduate studies. On the other hand, lower-level students chose to study in newer universities with lower social prestige. Therefore, this research shows that the social origin of the students influences the choice of university degree depending on its validity and the prospects for postgraduate studies.

It therefore appears that the system of educational choices made by young people and involving the carrying out of top-level studies is shaped by their class habitus as it in turn is shaped in the contexts of their social origin (Accardo, 1991; Bourdieu, 2006).

#### 4. Forms of family “capital”, social origin and the educational aspirations/expectations and choices of young people and their parents

The results of recent sociological research show that the family habitus, as well as the cultural, economic and social capital that the family has, have a significant impact on shaping the educational choices of young people in the middle and working class. This fact affects in turn the differentiated educational outlets and prospects of the social subjects (Sianou-Kyrgiou, 2010; Sianou-Kyrgiou & Tsiplakides, 2009, 2011; Spiliopoulou, Koustourakis, & Asimaki, 2017: 18; Tavares, Tavares, Justino, & Amaral, 2008; Thompson, 2009; Vryonides, 2003, 2007; Waters & Brooks, 2010).

In particular, young people from the middle social strata have stronger “stocks” of “family” cultural, economic and social capital and are geared to selecting studies with a high social and academic status, such as medicine and law. The experiences of the parents of young people from the middle social strata who have graduated from higher education seem to reinforce the choices and orientation of their children for university studies. In this case, both young people and their parents aim, through high-quality student choices, to maintain their social status and ensure the reproduction of their social prerogatives. On the other hand, young people of working-class origin whose families have a low volume of social, economic and cultural capital tend to make “pragmatic” choices in search of more “compromising” educational outlets (Lehmann, 2004, 2007a; Pugsley, 1998; Reay, 1998; Reay & Ball, 1998; Sianou-Kyrgiou, 2010; Sianou-Kyrgiou & Tsiplakides, 2009, 2011; Vryonides, 2003, 2007; Waters & Brooks, 2010).

The study by Waters & Brooks (2010), conducted in 2007-2008 through interviews with students from the UK who came from well-off socio-economic backgrounds and had studied abroad, is characteristic. These individuals were looking for ‘adventure and excitement’ through study abroad and often sought to postpone the start of their professional career in order to extend their student life. Nevertheless, students from the United Kingdom remained a privileged social group with the experiences they had in their favored socio-economic family environments, but

also with the “enhanced” financial resources that offered them a safety net for their future aspirations. Moreover, the educational choices made by these individuals resulted in the reproduction of their privileges, which is perceived through their educational path. They studied at prestigious academic institutions abroad, something that was not accidental, but based on their experiences of (private) education and the involvement of their parents in education. In other words, the habitus of the United Kingdom’s most socio-culturally privileged students was reflected in the decisions they made as they chose to study at higher academic institutions abroad seeking pleasure and “experience for experience’s sake” through an “aesthetic predisposition” (Waters & Brooks, 2010: 217, 220-222, 224, 226).

Diversity in cultural capital between social classes tends to contribute to differences in the level of participation of young people in higher education, as well as to the possibility of dropping out of studies by some young people (Noble & Davies, 2009) who considered attending university as a difficult and demanding process that fills them with insecurity and uncertainty (Lehmann, 2004). As a range of international scientific research reveals, non-traditional students, coming from the working-class or those with low family incomes, who study in “good” universities in terms of prestige choose in some cases to drop out of academic attendance. This is because they feel that they do not “fit” in or cannot cope with their fellow students from “privileged” socio-cultural environments, thus experiencing a class-cultural “alienation” (Aries & Seider, 2005; Granfield, 1991; Lehmann, 2007b, 2009a; Quinn, 2004).

Lehmann’s study (2007b), conducted through semi-structured interviews between 2001 and 2003 on a sample of 25 students in Southwestern Ontario, Canada, is indicative of the above finding. In particular, it appeared that many students of working-class origin left their studies at university because of class-cultural discontinuities such as the feeling of not belonging to the university field and the inability to interact and communicate effectively with their fellow students who came from privileged social strata. In this case, many young people of working-class origin tended to redefine their educational decisions by choosing diversified outlets. In particular, a number of young people have been geared to post-secondary education options, such as apprenticeship training or community colleges. Yet another section of young people turned to engaging in manual occupations which were akin to their working-class culture of origin (Lehmann, 2007b: 89, 93, 96, 105-106).

However, the findings of other sociological research have shown that many non-traditional higher education students, i.e. working-class students, chose to study at universities with high prestige in order to climb the ladder of social stratification. In this case, these students tended to “degrade” the background of their class of origin by favoring the desire to “transform” and/or improve their position in the social structure (Baker & Brown, 2007; Lehmann, 2009a, 2009b).

It seems therefore that working-class young people are called upon to reconcile themselves with the conflict that emerges between social mobility, class “loyalty” and class “betrayal” (Lehmann, 2009a: 632), a problem identified as *hidden injuries of class* (Sennett & Cobb, 1972, as cited in Lehmann, 2009a: 632) or described as *habitus dislocation* (Baxter & Britton, 2001, as cited in Lehmann, 2009a: 632; Lehmann, 2007b, as cited in Lehmann, 2009a: 632).

In this case, it could be argued that the life experiences of people of working-class origin which are unique in their specific contexts but also shared in relation to their structure with other people belonging to the same social class, (re)shape their predispositions which in turn affect the choices that define their educational career (Bourdieu, 2006; Corcuff, 2007: 29; Maton, 2008).

##### 5. Educational choices of young people according to their social background and the effects of their school environment

The findings of recent sociological studies reveal that school, through its culture and habitus, which it attempts to cultivate in its students, contributes significantly to shaping the decisions and choices that define the students' educational careers. Moreover, the results of these studies raise questions regarding the existence of class and educational inequalities at the expense of socio-culturally less well-off young people, whose habitus does not go hand in hand with the 'legitimate' school habitus (Mullen, 2009; Oliver & Kettley, 2010; Pásztor, 2010; Pini, Price, & McDonald, 2010; Reay, 1998).

Oliver & Kettley's (2010) study, conducted in 2005 with teachers and students in six institutions in England, is characteristic. This study showed that the teachers' habitus has shaped the attitudes and predispositions of students to a great extent in higher education. More specifically, there have been different practices on the part of teachers which influence their students through counseling and support in order for them to decide whether or not to study at university level. In particular, some teachers welcomed and urged students to apply for elite Universities, acting as "facilitators", while other teachers prevented students from applying, acting as "guardians". In particular, teachers' attitudes towards student attendance at elite universities were dictated by the strength of their conviction to change the status quo that is unequal at the expense of disadvantaged socio-economic groups. These particular teachers sought, through school practice, to encourage students from non-privileged social backgrounds to apply to elite Universities. They attempted to achieve this by bridging the habitus they had acquired from their family with the "cultivated" habitus of the school. The second group of teachers tended to lessen student attendance in elite universities by 'protecting' them from the possibility of feeling that they did not belong in the university field, and the experience of a sense of "alienation" that they had experienced in attending prestigious universities. Thus, teachers' past experiences of higher education have shaped their beliefs and perceptions of what their students should follow. In other words, their predispositions are reflected in a series of values and attitudes that affect their students' choice of higher education (Oliver & Kettley, 2010: 737, 740-741, 750-751).

According to Bourdieu, the culture of the "sovereign" social class is incorporated into educational institutions. The advantageous position occupied by young people from the "dominant" social class contributes to their educational success, which in turn leads to social reproduction (Harker, 1984, as cited in Li, 2013: 832). In particular, students from family backgrounds whose beliefs and knowledge are consistent with those of "legitimate" school culture and who have the habitus that facilitates the "game" played in school enjoy the appreciation of the teachers in the context of their learning effort. In contrast, the school exacerbates the weaknesses of the non-privileged from a socio-cultural point of view (Bourdieu & Passeron, 1996: 76; Mills & Gale, 2002: 110; Milonas, n.d.: 213).

Pini, Price & McDonald's study (2010), conducted in 2008 through interviews with 13 teachers who taught in rural and remote high schools in Queensland, Australia, is representative of the previous finding. The findings of this research showed that teachers had high educational and professional expectations of the students whose habitus is consistent with that of the school. In particular, teachers expected middle-class students to study at university, following an academic career, in contrast to their expectations of working-class students. Teachers argued that children working on farms had inherited from their family the values of tradition and the experiences they needed to work on a farm. Teachers also saw it as paradoxical that there were some children with limited cultural capital who, however, earned more money from their work than the teachers. It was found therefore that the teachers supported those children who possessed the predispositions, perceptions and the way of thinking and action that the school calls for and legitimizes. Through this support, these children were emotionally empowered, and believed in

their abilities, which was ‘translated’ into high academic performance (Pini et al., 2010: 17, 20-21, 27).

## 6. Concluding observations

According to what we have examined above, we come to the following conclusions:

(1) The analysis of the research reveals the impact of socio-economic and cultural factors on shaping the educational choices of people of different social origin. In particular, the young people’s social class of origin, which produces its own class dispositions (class habitus), the family habitus, the volume of cultural, social and economic capital that the student’s family possesses, as well as the way in which teachers, who carry their own system of predispositions within the educational institutions that the young people attend, approach young people from different social classes, are key factors that influence the decision-making and the choices which identify the young people’s educational path.

(2) The educational choices of young people, as shown by most of the sociological research, are shaped by their social class of origin, taking an “incompatible” or “pragmatic” dimension (Bourdieu, 1993). The material living conditions of young people according to their social origin produce experiences of opportunities and non-opportunities, possible and unlikely results, which in turn shape their unconscious feeling about what is possible, unlikely, but also desirable for them. In this way, they learn their “natural” position in the social world and thus form the system of predispositions and choices that define their educational future (Maton, 2008: 58).

(3) Young middle-class people tend to choose university studies, making it a part of a ‘normal biography’ that has historically been shaped within their family environment. The academic choice made by young middle-class people can be identified as an expected process linked to the social class of origin. In this sense, it is a learned educational decision that has been taken in the context of the middle-class family culture (Bourdieu, 1990; Bourdieu & Passeron, 1996; Du Bois-Reymond, 1998). On the other hand, many young people of a socially-oriented nature tend to adopt a middle-class ‘predisposition’ and seek to pursue university studies at senior academic institutions of high standing in order to have opportunities for social development. In this case, they tend to ‘degrade’ the background of their class of origin with their desire to ‘transform’ their social position so as to rise socially (Baker & Brown, 2007; Lehmann, 2009a, 2009b). In many cases, young people in this particular category tend to abandon attendance at university as they feel they do not belong in this particular place in the face of a class-cultural discontinuity or mismatch between school culture and their own class culture. They are consequently led to the search for more “realistic” educational outlets, consistent with their working-class culture of origin (Lehmann, 2007b, 2009a; Quinn, 2004).

(4) According to several sociological studies, school, and more so the university, tends to contribute to the preservation and reproduction of social and educational inequalities as it favors and supports young people from the most privileged socio-cultural environments whose habitus has its own culture (Bourdieu & Passeron, 1990). Indeed, despite the increasing number of young people accessing higher education, the distribution of the student population is still unevenly shaped and tends to favor students who are already socially, economically and culturally favored. It could therefore be argued that the education system (re)produces the engraving of the “legitimate” culture and thus contributes to the reproduction of power relations between the “dominant” and the “dominated” social groups or social classes (Milonas, n.d.: 229; Milonas, 1995: 83).

Concluding this endeavor, we believe that it would be worthy of scientific interest to carry out a longitudinal investigation and sociological analysis of the scientific work that deals with the choices of young people who identify their educational paths in relation to socio-economic and cultural factors of influence.

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### References

- Accardo, A. (1991). *Initiation à la sociologie: l'illusionnisme social: une lecture de Bourdieu*. Bordeaux: Le Mascaret.
- Accardo, A., & Corcuff, P. (1986). *La Sociologie de Bourdieu*. Bordeaux: Le Mascaret.
- Andres, L., & Looker, E. D. (2001). Rurality and capital: Educational expectations and attainments of rural, urban/rural, and metropolitan youth. *The Canadian Journal of Higher Education*, 31(2), 1-45.
- Archer, A. (2002). Change, culture and tradition: British Muslim pupils talk about Muslim girls' post-16 “choices”. *Race Ethnicity and Education*, 5(4), 359-376.
- Archer, L., Halsall, A., & Hollingworth, S. (2007). Class, gender, (hetero)sexuality and schooling: Paradoxes within working-class girls' engagement with education and post-16 aspirations. *British Journal of Sociology of Education*, 28(2), 165-180.
- Aries, E., & Seider, M. (2005). The interactive relationship between class identity and the college experience: The case of lower income students. *Qualitative Sociology*, 28(4), 419-443.
- Asimaki, A., & Koustourakis, G. (2014). Habitus: An attempt at a thorough analysis of a controversial concept in Pierre Bourdieu's theory of practice. *Social Sciences*, 3(4), 121-131.
- Azaola, M. C. (2012). Revisiting Bourdieu: Alternative educational systems in the light of the theory of social and cultural reproduction. *International Studies in Sociology of Education*, 22(2), 81-95.
- Baker, S., & Brown, B. (2007). Images of excellence: constructions of institutional prestige and reflections in the university choice process. *British Journal of Sociology of Education*, 28(3), 377-391.
- Ball, S. J., Davies, J., David, M., & Reay, D. (2002). “Classification” and “Judgement”: Social class and the “cognitive structures” of choice of Higher Education. *British Journal of Sociology of Education*, 23(1), 51-72.
- Ball, S. J., Reay, D., & David, M. (2002). “Ethnic Choosing”: Minority ethnic students, social class and higher education choice. *Race Ethnicity and Education*, 5(4), 333-357.
- Bourdieu, P. (1977). *Outline of a theory of practice* (R. Nice, Trans.). Cambridge: Cambridge University Press.
- Bourdieu, P. (1979). *La distinction. Critique sociale du jugement*. Paris: Les Éditions de Minuit.
- Bourdieu, P. (1986). The forms of capital. In: J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241-258). New York: Greenwood Press.
- Bourdieu, P. (1987). *Choses dites*. Paris: Les Éditions de Minuit.
- Bourdieu, P. (1990). *The logic of practice* (R. Nice, Trans.). Stanford, CA: Stanford University Press.
- Bourdieu, P. (1993). *Sociology in question*. London: Sage.

- Bourdieu, P. (1994). *Texts of Sociology*. Athens: Delfini.
- Bourdieu, P. (2006). *The sense of practice*. Athens: Alexandria.
- Bourdieu, P., & Passeron, J.-C. (1970). *La reproduction. Éléments pour une théorie du système d'enseignement*. Paris: Les Éditions de Minuit.
- Bourdieu, P., & Passeron, J.-C. (1990). *Reproduction in education, society and culture*. London: Sage.
- Bourdieu, P., & Passeron, J.-C. (1996). *The inheritors: Students and their culture*. Athens: Institute of Book A. Kardamitsa.
- Bourdieu, P., & Wacquant, L. (1992). *An invitation to reflexive sociology*. Chicago: University of Chicago Press.
- Chakhaia, L., Andguladze, N., Janelidze, A., & Pruidze, N. (2014). Identities, cultural capital, educational choices and post-communist transition: an ethnographic study of Georgian youth. *Southeast European and Black Sea Studies*, 14(2), 301-318.
- Corcuff, P. (2007). *Les nouvelles sociologies*. Paris: Armand Colin.
- Crozier, G., Reay, R., Clayton, J., Colliander, L., & Grinstead, J. (2008). Different strokes for different folks: diverse students in diverse institutions – Experiences of higher education. *Research Papers in Education*, 23(2), 167-177.
- David, M. E., Ball, S. J., Davies, J., & Reay, D. (2003). Gender issues in parental involvement in student choices of higher education. *Gender and Education*, 15(1), 21-36.
- Devine, D. (2009). Mobilizing capitals? Migrant children's negotiation of their everyday lives in school. *British Journal of Sociology of Education*, 30(5), 521-535.
- Du Bois-Reymond, M. (1998). "I don't want to commit myself yet": Young people's life concepts. *Journal of Youth Studies*, 1(1), 63-79.
- Gil-Flores, J., Padilla-Carmona, M. T., & Suárez-Ortega, M. (2011). Influence of gender, educational attainment and family environment on the educational aspirations of secondary school students. *Educational Review*, 63(3), 345-363.
- Goldrick-Rab, S. (2006). Following their every move: An investigation of social-class differences in college pathways. *Sociology of Education*, 79(1), 61-79.
- Granfield, R. (1991). Making it by faking it: Working-class students in an elite academic environment. *Journal of Contemporary Ethnography*, 20(3), 331-351.
- Iannelli, C. (2007). Inequalities in entry to higher education: A comparison over time between Scotland and England and Wales. *Higher Education Quarterly*, 61(3), 306-333.
- Jæger, M. M. (2007). Educational mobility across three generations: The changing impact of parental social class, economic, cultural and social capital. *European Societies*, 9(4), 527-550.
- Kloot, B. (2009). Exploring the value of Bourdieu's framework in the context of institutional change. *Studies in Higher Education*, 34(4), 469-481.
- Koustourakis, G., Asimaki, A., & Spiliopoulou, G. (2016a). Cultural capital and educational expectations of native and immigrant parents of primary school students: Qualitative study. *International Journal of Sociology of Education*, 5(3), 166-189.
- Koustourakis, G., Spiliopoulou, G., & Asimaki, A. (2016b). The influence of a family's cultural capital on the formation of the educational and occupational expectations of native and immigrant primary school students. *Educational Journal of the University of Patras UNESCO Chair*, 3(1), 8-27.
- Kyridis, A. (2015). *Educational inequality*. Thessaloniki: Kyriakidis Bros.
- Laberge, S. (1995). Toward an integration of gender into Bourdieu's concept of cultural capital. *Sociology of Sport Journal*, 12(2), 132-146.

- Lehmann, W. (2004). "For some reason I get a little scared": Structure, agency, and risk in school-work transitions. *Journal of Youth Studies*, 7(4), 379-396.
- Lehmann, W. (2007a). *Choosing to labour? School-work transitions and social class*. Montreal and Kingston: McGill-Queen's University Press.
- Lehmann, W. (2007b). "I just didn't feel like I fit in": The role of habitus in university dropout decisions. *Canadian Journal of Higher Education*, 37(2), 89-110.
- Lehmann, W. (2009a). Becoming middle class: How working-class university students draw and transgress moral class boundaries. *Sociology*, 43(4), 631-647.
- Lehmann, W. (2009b). University as vocational education: working-class students' expectations for university. *British Journal of Sociology of Education*, 30(2), 137-149.
- Li, H. (2013). Rural students' experiences in a Chinese elite university: capital, habitus and practices. *British Journal of Sociology of Education*, 34(5-6), 829-847.
- Machin, S., & Vignoles, A. (2004). Educational inequality: The widening socio-economic gap. *Fiscal Studies*, 25(2), 107-128.
- Maton, K. (2008). Habitus. In: M. Grenfell (Ed.), *Pierre Bourdieu: Key Concepts* (pp. 49-65). Stocksfield: Acumen.
- Metcalf, H. (1997). *Class and higher education: The participation of young people from lower social classes*. London: CIHE.
- Mills, C., & Gale, T. (2002). Schooling and the production of social inequalities: What can and should we be doing? *Melbourne Studies in Education*, 43(1), 107-128.
- Milonas, T. (n.d.). *Social reproduction in school. Theory and experience*. Athens: Armos.
- Milonas, T. (1995). Introductory insights on P. Bourdieu's theory. In: I. Lampiri-Dimaki & N. Panagiotopoulos (Eds.), *Sociology of Paedeia* (pp. 76-95). Athens: Kardamitsa-Delfini.
- Mullen, A. L. (2009). Elite destinations: pathways to attending an Ivy League University. *British Journal of Sociology of Education*, 30(1), 15-27.
- Noble, J., & Davies, P. (2009). Cultural capital as an explanation of variation in participation in higher education. *British Journal of Sociology of Education*, 30(5), 591-605.
- Oliver, C., & Kettley, N. (2010). Gatekeepers or facilitators: the influence of teacher habitus on student's applications to elite universities. *British Journal of Sociology of Education*, 31(6), 737-753.
- Pásztor, A. (2010). "Go, go on and higher an' higher". Second-generation Turks' understanding of the role of education and their struggle through the Dutch school system. *British Journal of Sociology of Education*, 31(1), 59-70.
- Patereka, Ch. (1986). *Basic concepts of Pierre Bourdieu and Jean-Claude Passeron*. Thessaloniki: Kyriakidis Bros.
- Pini, B., Price, R., & McDonald, P. (2010). Teachers and the emotional dimensions of class in resource-affected rural Australia. *British Journal of Sociology of Education*, 31(1), 17-30.
- Pugsley, L. (1998). Throwing your brains at it: Higher education, markets and choice. *International Studies in Sociology of Education*, 8(1), 71-90.
- Quinn, J. (2004). Understanding working-class "drop-out" from higher education through a sociocultural lens: Cultural narratives and local contexts. *International Studies in Sociology of Education*, 14(1), 57-74.
- Reay, D. (1998). Always knowing and never being sure: Familial and institutional habituses and higher education choice. *Journal of Education Policy*, 13(4), 519-529.
- Reay, D., & Ball, S. J. (1998). "Making their minds up": Family dynamics of school choice. *British Educational Research Journal*, 24(4), 431-448.



- Reay, D., David, M., & Ball, S. (2001). Making a difference? Institutional habituses and higher education choice. *Sociological Research Online*, 5(4). Retrieved from <http://www.socresonline.org.uk/5/4/reay.html>
- Reay, D., David, M. E., & Ball, S. (2005). *Degrees of choice. Social class, race and gender in higher education*. Stoke on Trent, UK: Trentham Books.
- Sianou-Kyrgiou, E. (2006). *Education and social inequalities – The transition from Secondary to Higher Education (1997 – 2004)*. Athens: Metaixmio.
- Sianou-Kyrgiou, E. (2008). Social class and access to higher education in Greece: supportive preparation lessons and success in national exams. *International Studies in Sociology of Education*, 18(3-4), 173-183.
- Sianou-Kyrgiou, E. (2010). Stratification in higher education, choice and social inequalities in Greece. *Higher Education Quarterly*, 64(1), 22-40.
- Sianou-Kyrgiou, E., & Tsiplakides, I. (2009). Choice and social class of medical school students in Greece. *British Journal of Sociology of Education*, 30(6), 727-740.
- Sianou-Kyrgiou, E., & Tsiplakides, I. (2011). Similar performance, but different choices: social class and higher education choice in Greece. *Studies in Higher Education*, 36(1), 89-102.
- Smith, W., & Tinning, R. (2011). It's not about logic, it's about logics of practice: a case study of teacher education reform in New Zealand. *Asia-Pacific Journal of Teacher Education*, 39(3), 235-246.
- Spiliopoulou, G., Koustourakis, G., & Asimaki, A. (2017). Family “capital” and young people’s educational-occupational choices in the context of a review of recent sociological literature. *Open Journal for Sociological Studies*, 1(1), 15-26.
- Tavares, D., Tavares, O., Justino, E., & Amaral, A. (2008). Students’ preferences and needs in Portuguese higher education. *European Journal of Education*, 43(1), 107-122.
- Thompson, R. (2009). Social class and participation in further education: Evidence from the Youth Cohort Study of England and Wales. *British Journal of Sociology of Education*, 30(1), 29-42.
- Vryonides, M. (2003). Social capital in a historic context of modernization: its effects on Cypriot educational choice-making. *Mediterranean Journal of Educational Studies*, 8(2), 35-58.
- Vryonides, M. (2007). Social and cultural capital in educational research: Issues of operationalisation and measurement. *British Educational Research Journal* 33(6), 867-885.
- Wakeling, P. (2005). *La noblesse d’ état anglaise?* Social class and progression to postgraduate. *British Journal of Sociology of Education*, 26(4), 505-522.
- Waters, J., & Brooks, R. (2010). Accidental achievers? International higher education, class reproduction and privilege in the experiences of UK students overseas. *British Journal of Sociology of Education*, 31(2), 217-228.
- Watson, J. (2013). Profitable portfolios: Capital that counts in higher education. *British Journal of Sociology of Education*, 34(3), 412-430.
- Whelan, C. T., & Hannan, D. F. (1999). Class inequalities in educational attainment among the adult population in the Republic of Ireland. *The Economic and Social Review*, 30(3), 285-307.



## Motivation of Male Students for Preschool Teacher Profession

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### *Abstract*

The number of single parent families is on the rise. There is a lack of father figure both in the family and kindergarten where children are exposed to female influence. Eurostat statistical data (2015) show that female teaching staff is dominant in pre-school education with 95%. The number of female preschool teachers in France is 83%, in Netherlands 86.6%, in the United Kingdom 90%. Male preschool teachers are a rare breed in Croatia too, only 2.3% work in preschool institutions. The aim of the research was to examine motivation of male students for preschool teacher profession. Interviews with all male students enrolled at Undergraduate pre-school education in Osijek and Slavonski Brod were conducted. The results showed four clusters of male preschool students' motivation. Students are intrinsically motivated and see this profession as a calling. This topic sheds new light on family pedagogy and opens up insufficiently explored area of research.

*Keywords:* male students, perceptions, preschool teachers.

### 1. Introduction

Caring for children has always been regarded as women's job, but in recent years, scientists started exploring the influence of father and other male figures on children's lives (Yogman & Garfield, 2016; Carrillo, Bermúdez, Suárez, Gutiérrez & Delgado, 2016; Leon, Jhe Bai & Fuller, 2016). New studies show the importance of father involvement in children's lives. Males and females are different and children can only benefit from growing up with two different models of behaviour. In preschool institutions, child should be our focus. Raising the number of preschool teachers who have relevant knowledge, energy, willingness and love for the job, regardless of gender, should also be in the focus of policy makers, universities who educate future experts and the society as a whole.

On one hand, the number of divorces has risen<sup>1</sup>, on the other hand, the trend of decreasing marriage rates is continuing<sup>2</sup>. Also, the number of births outside the marriage is rapidly

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<sup>1</sup> In Croatia the number of divorces has risen from 1 per 1000 inhabitants (year 2000) to 1.4 per 1000 inhabitants (year 2013) (Eurostat, 2016).

<sup>2</sup> From 4.9 marriages per 1000 inhabitants in 2000, to 4.5 marriages per 1000 inhabitants in 2013 (*Ibid.*).

growing in Croatia<sup>3</sup>. This brings us to looser family connections. Also, we are facing different family structures and family dynamics. Children spend long hours in kindergarten and later in school. Parents work hard, sometimes even two jobs in order to make ends meet. Children from an early age attend many extracurricular activities, such as sports or language classes and spend only few hours with their parents (Kralj, 2012; Aman Back, Björkovist, 2004). Raising trend in family research is single motherhood by choice. Reason for this type of motherhood is a combination of desire to become a mother and inability to find a suitable partner (Jordana-Pröpper, 2013). This has a strong influence on children who are exposed to female influence both at home and in kindergarten.

- Male preschool teachers are a minority and more research needs to be conducted.
- It is important to see what motivates male students to become preschool teachers.
- Four clusters of motivation are constructed after interviewing male students.

The role of men in preschool institutions is not explored enough. Male preschool teachers can bring a lot to a preschool institution if we, as a society, allow them to do their job and not treat them as janitors who are doing all kinds of repairs in kindergarten. They are not here to substitute female preschool teachers, but to create healthy and diverse environment together with their female colleagues. Children can only benefit from diverse activities and personalities of both male and female preschool teachers. Male preschool teachers can serve as a model to young children especially boys. They do a lot of physical activities, unlike female preschool teachers who prefer calm games and lot of rules (Besnard & Letarte, 2017; Sandberg & Pramling-Samuelsson, 2005). Previous studies have shown the positive effects of the presence of both parents on early childhood development (Besnard et al., 2017; Lamb, 1996; Mitchell, See, Tarkow, Cabrera, McFadden & Shannon, 2007; Palm & Fagan, 2008). In order to provide good development in preschool it is necessary to construct family environment that encompasses both female and male preschool teachers.

## 2. Theoretical framework

Scientific research lacks an up-to-date review of the influence of teacher and preschool teacher gender on children (Sumsion, 2010; Wiest, 2004; Sabbe & Aelterman, 2007). Differences between boys and girls are seen in early stages of development. Research in the UK, conducted on infants from 9 to 32 months, showed gender differences in toy preferences. Boys choose gender appropriate toys like cars, diggers and balls, while girls choose dolls, pink teddy bears and cooking pots (Todd, Barry & Thommessen, 2016). This research shows that gender differences are biologically shaped even before the influence of parents, upbringing and society. Furthermore, girls spend more time on group games, routine activities and pictures, where guidance from adults is welcomed. On the other hand, boys spend more time on construction games and outdoor activities that are not pre-planned (Jensen, 1996). Having these differences in mind, it is necessary to include both female and male role models in children's early development. It is also stated in the research that the care provided by men can promote the development of prosocial behaviour in young boys (Jensen, 1996).

Historically, early childhood education has been concerned with the caring for and nurturing of young children and, consequently, continues to be widely regarded as women's work or job (Wiest, 2004; Sumsion, 2010; Mukuna & Mutsotso, 2011; Jensen, 1996; Simpson, 2005; Stroud, Smith, Ealy, Hurst, 2006; Nordberg, 2010; Sabbe & Aelterman, 2007; Erden, Ozgun & Ciftci, 2011). There are a number of reasons for teaching and upbringing being female oriented professions in the history. Women are seen as role models for moral behaviour expressing

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<sup>3</sup> From 9 live births per 1000 inhabitants in 2000 to 16.1 live births per 1000 inhabitants in 2013 (*Ibid.*).

emotional side, unlike men who are seen as strong, independent and fit for higher work positions. During the war periods in history, men had to go on the battlefield and women took their place in school. Women were less paid for the same job which was an important cost saving for schools (Wiest, 2004).

The number of men in early childhood programs has risen over the years. It is due to three related trends (Mukuna et al., 2011: 1876):

- (1) the lack of men – usually fathers – in the lives of many young children,
- (2) the dearth of men in the early childhood field, and
- (3) an increased interest in father involvement in early childhood programs.

On the other hand, Erden et al. (2011) state three main reasons for supporting male teachers. First reason is the absence of father in children's life, next one is males serving as positive role models and final reason is gender equality. Also, Farquhar, Cablk, Buckingham, Butler and Ballantyne (2006) state that children in their formative years spend up to 50 hours a week in childcare environments where they are surrounded by females. Children do not spend enough time with adult males and their contact with positive male role models both in the family and in community is reduced. Moreover, Shaham (1991) identified the following personality factors for the five male preschool teachers he interviewed: individualism, motivation, social awareness, and nonmaterialism (in Wiest, 2004). Numerous research has shown that female preschool teachers tend to use calm activities, more reading and silent play, while male preschool teachers use more physical activities and more turbulent play (Besnard et al., 2017; Sandberg et al., 2005).

Number of authors (Brownhill, 2014; Jones, 2007; Erden et al., 2011) have challenged the question of male early years' teachers. Brownhill (2014) criticized the existence of positive male role models, stating the ambiguity of that phrase. Different men exhibit different individual and professional characteristics, and we can hardly talk about overall population of men serving as positive role models. Some authors are concerned with the safety of children and possible abuse of children by men. Jones (2007) analysed opinions of female teachers on inclusion of men in early years teaching. Female early years' teachers emphasized the possibility of child abuse by men, and would not hire a male teacher not only for the sake of men (to not be exposed to ill treatment) but for their own sake and the sake of other female teachers. Traditional role of females as mothers and protectors is seen here. Results in Erden et al. (2011) research show that society still considers teaching as a female profession.

Sak, Sahin and Sahin (2012) investigated female preschool pre-service teachers' views about male teachers. There were 24 participants and the results have highlighted three main topics: the presence of male preschool teachers, factors affecting male teachers' choice of profession and ways of decreasing negative image of male preschool teachers. Regarding the first topic, most female preschool teachers (n=21) consider men should be involved in preschool teaching. Furthermore, they see men as more creative, better at physical activities and dealing with discipline problems. When it comes to factors affecting male teachers' choice of profession, female preschool teachers state that the main reason is a possibility of advancement to a higher position as administrators or research assistants. But that is also a reason why this profession is considered a female profession. Men usually work as preschool teachers until they find "a path to other work" (Sak et al., 2012: 589), so their aim is career progression. Regarding the third topic, female preschool teachers state that it is necessary to conduct more research related to male preschool teachers in the world and various topics related to preschool education. Moreover, society and parents should be informed via advertisements and TV programs of the role of male teachers in the preschool classroom. The female preschool pre-service teachers stated that male teachers should be involved in preschool teaching because of their professionalism and support for the development of the children's emotional skills.

Stroud et al. (2006) conducted interviews with 28 male early childhood or elementary education majors. The results have shown that the main impact on choosing this career path had professional educators (teachers, principal) who served as a positive role model to young men. Interviewees also stated that being male is an advantage in this job, but on the other hand, the fact that they are male would set them apart from female colleagues. They consider male and female teachers take up different roles, but they are not related to curriculum or teaching practice but questions of sociological impact, especially in single-parent families. Although the interviewees emphasize the need for more men in this profession, only four students express a desire to stay in classroom teaching. Others reported that they wish to work in administration or college teaching at some future time. It can be concluded that male preschool students from this study are extrinsically motivated for preschool teaching profession.

Erden et al. (2011) conducted a study in Turkey which aim was to understand male preschool teachers' reasons for choosing this profession and their families' and friends' opinions of participants' career choices. The sample was eight volunteer preschool teachers. There were four categories of the research: (1) *the reason of choosing pre-school education teaching*; (2) *families' attitudes towards male preschool education teachers*; (3) *friends' attitudes towards male pre-school education teachers*; and (4) *male pre-school teachers' ideal profession*. Firstly, the study showed that participants consciously decided to become teachers because of the job guarantee and financial concerns, but if given a chance they would change their profession. Secondly, their families did not support them and they considered it a female job, while friends made fun of them. Lastly, the study has shown that there is still a traditional approach to male preschool teachers in Turkey.

Massari (2014) conducted a study on the sample of 173 students from early childhood education and primary school pedagogy. The aim was to investigate motivation for choosing teaching as a career. The survey with eight questions was used as an instrument. Motivation for teaching was divided into three parts, altruistic, intrinsic and extrinsic reasons. The results have shown that altruistic reasons are on the first place, then intrinsic and lastly extrinsic reasons. Top three reasons for choosing teaching as a career are *teaching vocation, love for children and social responsibility for nurturing the young*. Furthermore, the results have shown that students from bachelor program are less motivated for teaching than those from the master program. This study included both male and female students with no special mentioning of male students.

Besnard et al. (2017) made most recent research on the sample of 53 teachers (43% male) in preschool institutions and 180 children (50% boys). The aim was to investigate social adaptation of children in groups where kindergarten teacher was male and groups where kindergarten teacher was female. Parents assessed children's social adaptation on a given questionnaire, and independent observers assessed teaching practices in usual classroom setting. The results have shown that there are no differences in educational practices between male and female teachers, but the presence of male teachers had an impact on children. "These children were less timid, less anxious, and less withdrawn" (Besnard et al., 2017: 460).

In summary, analyzed research showed that we need more male preschool teachers, but that the notion of preschool teacher profession being female still prevails. From the analysis of the previous research, it can be concluded that there is a lack of research on male preschool students' motivation. Although there is a number of research dealing with topics such as motivation for choosing preschool teaching in general, opinions of female preschool teachers on inclusion of men in childcare institutions, and opinions of male preschool teachers who are already employed, there is not enough research on male students choosing to become preschool teachers. We hope to shed new light on this area of research so needed in contemporary society.

### 3. Method

#### 3. 1 Research design

The aim of the study was to explore motivation of male students for preschool teacher profession. Therefore, in this study we conducted interviews with male preschool students from the Faculty of Education in Osijek and Slavonski Brod<sup>4</sup>, in order to collect needed data.

#### 3. 2 Sample

First, second and third year male students enrolled at Undergraduate preschool education in Osijek and Slavonski Brod participated in the research. According to *Act on Preschool Upbringing and Education (Zakon o predškolskom odgoju i obrazovanju, 2014)* in Article 24, paragraph 4, person with undergraduate university degree of appropriate kind can establish employment relationship in kindergarten institution and take care of children from 6 months to school. On the graduate level on the Faculty of Education in Osijek there are no male students, so only undergraduate male students were included in the research. The sample was purposive because the aim of the research was to explore motivation of *male* preschool students; therefore, all male preschool students from Osijek and Slavonski Brod were included in the research. Percentage of male students in Undergraduate pre-school education studies on the Faculty of Education in Osijek (Chart 1) is 4.14 % (162 female and 7 male students). Number of male students in Slavonski Brod is 3, while the overall number of students there is 159, which means that male students make up only 1,89% (Chart 2). Overall number of students on the Faculty of Education in Osijek and Slavonski Brod is 328, among which 10 are male and 318 are female students. Percentage of male students on the Faculty of Education in Osijek and Slavonski Brod is 3.05%. All male students gave their consent to participate in the research. It was expected for the sample to be small, given the fact that male preschool students are still a minority.

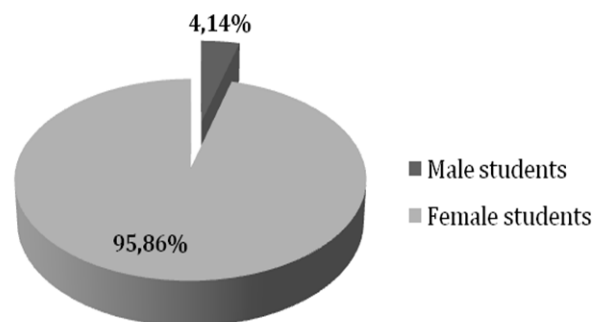


Chart 1. Percentages of female and male students in Undergraduate preschool education studies on the Faculty of Education in Osijek

<sup>4</sup> Faculty of Education is situated in Osijek, but it also has a branch in town called Slavonski Brod.

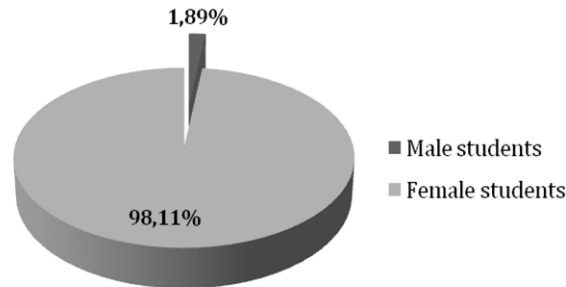


Chart 2. Percentages of female and male students in Undergraduate preschool education studies on the Faculty of Education in Slavonski Brod

### 3. 3 Data collection

Data collection was based on qualitative interview method. In-depth interviews with semi-structured questions were conducted. Similar interview was made by Stroud at al. in the United States of America in 2006. The researcher of the present study expanded interview questions and adapted it to Croatian context. Stroud at al. (2006) conducted the interview with elementary education majors and the researcher of the current study made interviews with male preschool students. Stroud at al. (2006) conducted this research 11 years ago, so it was necessary to do another research in this part of the world to see the changes that have occurred during time and possible new trends that have appeared.

All ten male preschool students accepted to participate in the research. The interviewer explained to each participant the aim of the research. Each interview lasted around 20 minutes. During interviews, the researcher used some written questions as a reminder, and the interviews were recorded. All participants were informed that the interview was recorded and they gave their consent. Before data analysis, the interviews were transcribed. After that, the responses were clustered in order to analyse qualitative data and four clusters of male preschool students' motivation were defined.

## 4. Results

After the analysis of in-depth interviews, collected data was grouped in the following four clusters (Chart 3): (1) *students' internal and external environment*; (2) *teaching as a calling*; (3) *good reputation of the profession*; and (4) *male preschool teacher as a father figure*. These four clusters make up a model for researching motivation of male students for preschool teacher study. All clusters are explained below and students' statements were given in order to provide better understanding of clusters.

### 4.1 Students' internal and external environment

In this cluster, the participants in their responses named environment (both internal as well as external) as an important factor in the choice of preschool profession. Internal environment includes participants' expectations from themselves, but also from their future



profession. They expect preschool teaching to be dynamic, hard and responsible job (5) and a job that will enable them to develop their competences and knowledge on how to best raise children and work with them (7). Participants consider they are good with children and know how to communicate with them (9) which also motivates them to finish study. Internal environment is the environment on which the participants can directly influence and they can change it with their attitudes and behaviour, while external environment is influenced by society, tradition and current social changes and events.

Students' external environment encompasses family, friends and parents of children they met in kindergartens during their practical work<sup>5</sup>. Students reported that the perception of their family, as well as the parents of children they worked with during their practical work was positive. Their family gave them support in pursuing preschool teaching career. Seven students chose this career by themselves, without the influence of others, while three students reported that others (parents, close relatives and professionals) influenced their choice of profession. Reaction of friends was a bit different because friends were surprised by their choice. One student reported a question that his friend posed on him: Do you need a degree to work with children? After the initial shock, friends accepted their decision which shows that preschool teaching is at first considered a female job. Parents of children that they met during practical work in kindergarten were positively surprised and considered male student as a welcoming change and fresh energy. Male student did not encounter any negative comment from parent nor female preschool teachers. Only two students reported that family members worked in similar profession being teachers, which brings to a conclusion that the influence of parents' education is not crucial in this case, although the support of parents in career choice is important and motivates them even more to work hard and earn a degree. Internal as well as external environment have an important role in motivating male students for preschool profession.

The statements of the students impose these conclusions:

- (a) Family is supportive ("My parents were happy when I told them I want to be a preschool teacher"; "They know how good I am with children, so they gave me their support");
- (b) Positive perception of parents in kindergarten on the inclusion of male students ("Parents were intrigued to see me in kindergarten"; "Parent asked if I can stay even longer and come more often");
- (c) Making the job dynamic and being responsible ("This job is not easy, you need to understand children and have a lot of energy"; "I would like to bring more TPR activities for the children and more outdoor activities or playing a guitar");
- (d) Making friends with children ("I love working with children and I think that I am good with children").

#### *4.2 Teaching as a calling*

Six out of ten students reported that this was not their first choice of profession. They studied on different faculties, but did not find themselves in these professions. They wanted something more, so after a year or two of studying, they decided to drop out and enroll at the Faculty of Education to become preschool teachers. Seven of the interviewed students said that they enrolled at this Faculty so they could work with children and help them in developing their potentials.

When asked why being a preschool teacher is a desirable profession for men, seven students out of ten responded that it is not a profession or a job, it is a calling. They see preschool

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<sup>5</sup> Students are obliged to spend a certain amount of time in kindergarten on each year of study to do practical tasks.

teaching as a way of influencing children's lives and helping them grow. Children are different and look for a different approach. Noticing and reacting to children's needs without them being able to tell, is something that cannot be learnt, but a competence you need to have within you. Moreover, some of them named the possibility of being creative (5) and gaining experience for future upbringing of their own children (4) as a benefit. Students emphasized that this profession is not for everyone, but only for those who are imaginative and able to put children's needs before their own.

The most important statements for this cluster are the following:

- (a) "I would not like everyone to become a preschool teacher";
- (b) "It is a calling and if you do not feel good working with children, you should not do it";
- (c) "This is a job for those who fantasize and dream, who are imaginative and creative, because children's lives are in stake".

#### *4.3 Positive reputation of the profession*

Male students think that the public is aware of the importance of their profession, because children are the most valuable asset to every parent and parents leave the care for their children in the hands of preschool teachers with utmost trust. They also emphasize that the public does not appreciate enough the work they do. Caring for and educating young children who come from different family backgrounds with different habits is not an easy job. Also, kindergartens in Croatia are crowded. In some kindergartens we have around 20-25 children in a group and just two preschool teachers. Furthermore, seven students said that the term "auntie" should not be used at all. Participants state that they are not nannies, because they care not only for children's upbringing but also for their education and development. Besides, the term "educator" or "teacher" is more appropriate than the term auntie, because then the public would connect this profession with both male and female sex.

Moreover, different workshops could be conducted to show the efficiency of male teachers (7), so that the perception of preschool teaching as a female profession would vanish from the public sphere. Media and scientific research should point out the lack of male preschool teachers (6). Also, positive examples of successful male preschool teachers should be given (5).

Most frequent statements from this cluster are the following:

- (a) "It is necessary to inform the public about the importance of male preschool teachers through different workshops";
- (b) "Male students could be very good teachers";
- (c) "Positive examples of successful male preschool teachers should be presented to the public".

#### *4.4 Male preschool teacher as a father figure*

Participants find motivation for this profession in the fact that there are not enough male preschool teachers in the kindergarten (10) and that male and female preschool teachers give the right picture of a family (male and female preschool teachers as model of mother and father). They also consider that they can bring fresh energy to kindergarten (8) and that they have more authority (7) than female preschool teachers do. This corresponds to the results of previous research (Besnard et al., 2017; Sandberg et al., 2005; Jensen, 1996).

Male students expect themselves to act like a father figure (8), and develop in children a sense of good as well as a positive stand towards life and the world around them (6). Male students point out the problems of family pedagogy and modern families, like alienation or using different media resources instead of real conversation and direct communication. Furthermore, high divorce rates call for more men in preschool environment, since male preschool teachers are for some children the only model of male behaviour that they are exposed to. Male students understand that fact as a challenge they are willing to take.

The most important statements for this cluster are the following:

- (a) “Men are more authoritative, we use different tone of voice, and different approach to discipline problems”;
- (b) “I want to create family atmosphere in the kindergarten, so I have a role of the father to fill”;
- (c) “Men have different approach to upbringing than women”;
- (d) “We bring more energy to the kindergarten, more sports activities, TPR, and field trips. Movement is extremely important”;
- (e) “In times of high divorce rates and raising number of single mothers, there is a need for male preschool teachers”.

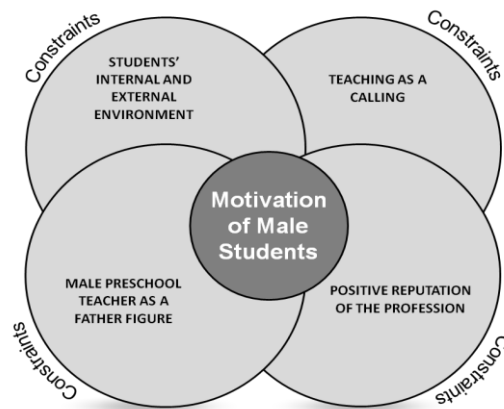


Chart 3. Model of motivation of male preschool students (source: author’s research)

## 5. Discussion

The aim of the research was to examine motivation of male students for preschool teacher profession that is still considered as a female profession. After the conducted interviews with ten male students of Undergraduate preschool education at the Faculty of Education in Osijek and Slavonski Brod, four clusters emerged which made a model for researching motivation of male students. This model shows the following four motivation factors: (1) *students’ internal and external environment*; (2) *teaching as a calling*; (3) *positive reputation of the profession*; and (4) *male preschool teacher as a father figure*.

Male students’ internal environment is what made them choose this profession in the first place. It encompasses their expectations and beliefs about the profession but also the notion that they have what it takes to be a good preschool teacher. Students’ external environment is not something that they can influence on but it is rather concerned with the opinions of close people who have an influence on male students, like family and friends. The important thing for male students’ motivation is also the acceptance of kindergarten children’s parents, since they are the most important in the lives of children they teach. Mutual acceptance, respect and cooperation is

crucial, especially for those male students who see preschool teaching as a calling. They are not here just to earn their living, but to get to know the children and influence their development in best way possible. Students are aware that teaching is not a highly esteemed profession, but they emphasise that it has a positive reputation. They see their biggest potential in the possibility to act like a father figure, or as a male figure. Higher divorce rates and single motherhood call for more male preschool teachers who would bring new perspectives and energy to kindergarten.

The results have shown that male students are intrinsically motivated for preschool teacher profession. Six students reported that this was not their first choice, because, like most men, they did not consider it to be a male profession. After enrolment and their first contact with children, they realized how suitable this was for them. Moreover, students gave some good remarks on how to motivate other men who are thinking of becoming preschool teachers. However, they are cautiously saying that it should not be imposed on others, because men should be motivated from the inside.

Although all students responded that they did not experience any obstacles while being in kindergarten, they named a few things that could be considered as an obstacle in their future work. Two of the students mentioned lower social and emotional intelligence in men in comparison to women and two stated negative connotations of men working with small children. One student mentioned male disorganization and seeing a male preschool teacher as a janitor who does all kinds of repairs. Men are seen as stronger sex who can help out with heavy lifting. For two students, the age of the children could be an obstacle because they prefer working with older children. The rest of the students (8) have no problem working with younger children and even in nursery. Above mentioned results are low and did not enter the clusters but they are important and should be discussed. Male students want to be treated the same as their female colleagues, because they are capable of working with children and working good.

If we compare the results of the current research with the results of other researchers, we can conclude that students in Osijek and Slavonski Brod want to stay in the profession, while the research findings of other authors (Stroud et al., 2006; Sak et al., 2012; Erden et al., 2011) state that students would like to change their profession as soon as possible and work on a higher position. This shows that these students, unlike the students from the present study, are extrinsically motivated. Furthermore, in Erden et al. (2011) research male students did not have the support of family and friends, while the results of the present study show good support of family and friends and even children's parents in the kindergarten. All of the interviewed students stated that preschool teacher profession has a positive reputation, but it is not paid enough. Reputation is far from the one it deserves, because it is considered a female job, and usually female professions are paid poorly and not valued enough in the society. The students emphasise the influence of tradition and division of professions on male and female. They are bothered with the term "auntie" so frequently used in our society.

The results of this study show how, even though still traditional, Croatia as a country opens up to new possibilities by slowly embracing male preschool teachers. Number of preschool students is slowly raising, but they need the support of the whole society. More practical visits to kindergartens should be made during high school, the term "auntie" should be terminated and more research should be done. The results can also help in bringing a positive social change concerning the view of male preschool teachers. Model of male preschool students' motivation with corresponding four categories could be used in future research to test the model in other parts of Croatia or even in other countries. Furthermore, interviews could be made with male preschool teachers who are employed to see how their motivation increased or decreased after a certain amount of years working with children. Also, the next logical step would be a longitudinal study with these students measuring their motivation after the first and third year of work.

## 6. Conclusion

This area of research is becoming more popular and needed due to recent changes in family pedagogy. The research was conducted with all male students who study preschool education on the J. J. Strossmayer University of Osijek through interviews. Therefore, all the information was gathered directly from the respondents. Precisely a small number of these students allowed direct examination of all of them and thus contributed to the value of this research. Through the interviews, fundamental knowledge of their motivation to choose this profession was gathered. Research results point to the importance of systematic research in this area so that educational models can track changes in today's families.

Few studies have examined motivation of male students for preschool teaching. Current study provides a model for investigating male students' motivation. The model consists of four categories: (1) *students' internal and external environment*, (2) *teaching as a calling*, (3) *good reputation of the profession*, and (4) *male preschool teacher as a father figure*. Male students are intrinsically motivated for preschool teacher profession. That is why we need more men, to bring novelty in kindergarten and equally participate in upbringing and educating children. Getting more men into preschool teaching is still a long process that cannot happen overnight. Men being part of preschool teacher profession is still unrecognised field of study in Croatia. However, it is important to start the process. This study sheds a new light on this area of research.

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## References

- Aman Back, S., & Björkovist, K. (2004). Parents' assessment of how much time they spent with their children at different ages. *Psychological Reports*, 94, 1025-1030.
- Besnard, T., & Letarte, M. (2017) Effect of male and female early childhood education teacher's educational practices on children's social adaptation. *Journal of Research in Childhood Education*, 31(3), 453-464.
- Brownhill, S. (2014). "Build me a male role model!" A critical exploration of the perceived qualities/characteristics of men in the early years (0-8) in England. *Gender and Education*, 26(3), 246-261.
- Carrillo, S., Bermúdez, M., Suárez, L., Gutiérrez, M. C., & Delgado, X. (2016). Father's perceptions of their role and involvement in the family: a qualitative study in a Colombian sample. *Revista Costarricense de Psicología*, 35(2), 101-118.
- Erden, S., Ozgun, O., & Ciftci, M. (2011). "I am a man, but I am a pre-school education teacher": Self- and social-perception of male pre-school teachers. *Procedia Social and Behavioral Sciences*, 15, 3199-3204.
- Eurostat (2016). *Marriage and divorce statistics*. Retrieved 10 April 2018 from: [http://ec.europa.eu/eurostat/statisticsexplained/index.php/Marriage\\_and\\_divorce\\_statistic#Fewer\\_marriages.2C\\_more\\_divorces](http://ec.europa.eu/eurostat/statisticsexplained/index.php/Marriage_and_divorce_statistic#Fewer_marriages.2C_more_divorces).

- Farquhar, S., Cablk, L., Buckingham, A., Butler, D., & Ballantyne, R. (2006). Men at work: Sexism in early childhood education. *Childforum Research Network*. Retrieved 15 April 2018 from: <http://www.childforum.com>.
- Jensen, J. (1996). Men as workers in childcare service. A discussion paper. *European Commission Network on Childcare*, London (England). Retrieved 15 May 2018 from: <https://eric.ed.gov/?id=ED403080>.
- Jones, D. (2007). High risk men: male teachers and sexuality in early years contexts. *International Journal of Adolescence and Youth*, 13(4), 239-255.
- Jordana-Pröpper, O. (2013). An anthropological approach to voluntarily single motherhood in Barcelona. *Journal of Comparative Research in Anthropology and Sociology*, 4(1), 41-61.
- Kralj, D. (2012). *Primjeren izbor slobodnih aktivnosti za dijete*. <http://www.poliklinika-djeca.hr/aktualno/teme/izbor-slobodnih-aktivnosti-za-dijete/>. Accessed 29 May 2018.
- Lamb, M. E. (1996). The development of father-infant relationships. In: M. E. Lamb (Ed.), *The role of the father in child development* (pp. 104–120). New York: John Wiley and Sons.
- Leon, S. C., Jhe Bai, G., & Fuller, A. K. (2016). Father involvement in child welfare: Associations with changes in externalizing behavior. *Child Abuse & Neglect*, 55, 73-80.
- Massari, G. (2014). Motivation for Teaching Career of Students from Early Childhood Education and Primary School Pedagogy. *Acta Didactica Napocensia*, 7, 4, 1-6.
- Mitchell, S. J., See, H. M., Tarkow, A. K. H., Cabrera, N., McFadden, K. E., & Shannon, J. D. (2007). Conducting studies with fathers: Challenges and opportunities. *Applied Development Science*, 11(4), 239-244.
- Mukuna, T., & Mutsotso, S. (2011). Gender inequalities in early childhood development education teaching profession in Kenya. *Educational Research*, 2(13), 1876-1885.
- Nordberg, M. (2010). Constructing masculinity in women's worlds: Men working as pre-school teachers and hairdressers. *NORA - Nordic Journal of Feminist and Gender Research*, 10(1), 26-37.
- Palm, G., & Fagan, J. (2008). Father involvement in early childhood programs: Review of the literature. *Early Child Development and Care*, 178(7-8), 745–759.
- Sabbe, E., & Aelterman, A. (2007). Gender in teaching: A literature review. *Teachers and Teaching*, 13(5), 521-538.
- Sak, R., Sahin, I., & Sahin, B. (2012). Views of female preschool pre-service teachers about male teaching colleagues. *Procedia - Social and Behavioral Sciences*, 47, 586-593.
- Sandberg, A., & Pramling-Samuelsson, I. (2005). An interview study of gender difference in preschool teachers' attitudes toward children's play. *Early Childhood Education Journal*, 32(5), 296-305.
- Simpson, R. (2005). *Men in non-traditional occupations: Career entry, career orientation and experience of role strain*. Uxbridge UK: School of Business and Management, Brunel University.
- Stroud, J., Smith, L., Ealy, L., & Hurst, R. (2006). Choosing to teach: Perceptions of male pre-service teachers in early childhood and elementary education. *Early Child Development and Care*, 163(1), 49-60.
- Sumsion, J. (2010). Negotiating otherness: A male early childhood educator's gender positioning. *International Journal of Early Years Education*, 8(2), 129-140.
- Todd, B., Barry, J., & Thommessen, S. (2016). Preferences for 'gender-typed' toys in boys and girls aged 9 to 32 months. *Infant and Child Development*, 1-14.
- Wiest, L. (2004). The current status of male teachers of young children. *The Educational Forum*, 68(1), 62-70.

Yogman, M., & Garfield, C. (2016). Fathers' roles in the care and development of their children: The role of pediatricians. *Pediatrics*, 138(1), 1-15.

Zakon o predškolskom odgoju i obrazovanju (2014). <https://www.zakon.hr/z/492/Zakon-o-pred%C5%A1kolskom-odgoju-i-obrazovanju> Accessed 1 June 2018.





# Motivation and Obstacles to Adult Participation in Lifelong Learning Programs: The Effect of Gender and Age

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## *Abstract*

The main purpose of this research paper is to identify all those parameters that are factors of motivation and obstruction in the participation of the inhabitants of the island of Rhodes in lifelong learning programs. Issues pertaining to adult education are addressed through the statements of the respondents to enhance this objective, while there is an attempt to identify differentiated parameters among people of different gender and age. Following the analysis of the respondents' statements, it was found that learning is to a great extent considered by the inhabitants of the island to be a stepping stone to overcome all sorts of difficulties they may encounter. Regarding the differences in age and gender statements, it is found that the most significant differences relating to the reasons for motivation are attributed to social and environmental grounds whereas in terms of the obstruction reasons statistically significant differences are found regarding the financial and work-related ones. These conclusions differ significantly with respect to the demographic characteristics of the sample, which in itself highlights the complexity of this issue and calls for further study and research.

*Keywords:* motivation reasons, obstacles, adult participation, lifelong learning programs, gender, age.

## 1. Introduction: Theoretical background

### 1.1 *Lifelong learning*

Lifelong learning includes any form of learning activity that takes place over a person's life and aims at acquiring or improving knowledge and skills. It contributes to the formation of an integrated personality, to social cohesion, to economic and cultural development, to professional integration and progress, as well as to the active participation of citizens in social and environmental issues (Oduaran, 2006; Page, 2005; Edwards, 2003; Bergevin, 1995; Nadler & Nadler, 1995).

Benjamin Bloom argued that “at any age people actually learn to respond to a deep and powerful interest” (Koroneos, 2002). Learning is a process of personal change that is taking place for anyone to adapt to ever changing conditions and experiences, so it is clear that the context of lifelong learning refers to a system consisting of people going through transformation, who are called into action in a constantly changing world (Rogers, 2002; Bigge, 1990; Kolb, 1984). Although it occurs atypically from the early years of a person's life, it is founded on pre-school

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education and continues after the completion of formal or initial education throughout their adult life. It is a continuous process that accompanies a person continuously, either within the framework of the organized educational system or through numerous and varied learning experiences, taking place at informal or organized educational processes.

- Motivational reasons for participation mainly include personal pleasure, work, social background and financial state.
- Educational, organizational, labor and economic reasons are included as main obstacles to adults' lifelong learning.
- Economic and labor reasons are more significant for motivating women. On the contrary, high cost and family engagements are main obstacle reasons for them.
- The younger the participants, the greater the influence by their peers a fact inversely proportional to age.

The characteristics of lifelong learning, as described by the UNESCO Educational Institution (U.I.E.), forge the educational context within which a person advances throughout their life. According to the U.I.E. lifelong learning is characterized by (Goad, 1984):

- the use of a wide range of activities that contribute to and guarantee the possibility for people to participate in a variety of educational experiences in their lifespan;
- a flexibility and diversity of content, techniques and methods, but also of the time required for the completion of the programs, aiming at the creation of the most favorable conditions for the education of people of all ages, sexes and categories;
- the implementation of lifelong learning through formal, non-formal and atypical education;
- a gradual blending and exploitation of both educational parameters and social ones;
- democratization through the creation of opportunities for free participation of all;
- setting up a framework within which opportunities and incentives will be provided in order to expand and more effectively implement lifelong learning so as to ensure better education to citizens;
- cultivating and learning how people learn, self-assess and collaborate, with the ultimate goal to increase individual learning readiness and consequently overall progress;
- the recognition of the social role of education, which is the development of human potential to its fullest extent.

### 1.2 *Adult education*

Adult education spans the biggest part of a person's education, which begins with the completion of compulsory or initial education and continues through informal processes throughout their life (Kokkos, 2005). Adult education is the part of lifelong learning referring to adult learners (Mezirow, 2007). UNESCO formulated in 1976 a corresponding definition according to which "adult education is every educational process involving every content, level, and method, whether formal or not, or a process that extends over time or replaces initial education in schools, colleges and universities through which individuals who are considered adult within the society they are members of, develop their skills, enrich their knowledge, improve their technical and professional qualifications or turn them to other direction in order to bring about changes in their attitudes or behavior envisioning both full personal development and participation in a harmonized and robust social, economic and cultural growth" (Kokkos, 2005).

### 1.3 Participation requirements

Adult learners decide to take part in a learning process so as to fulfill some specific needs, although it is obvious that in some cases their motivation does not stem from the existence of a particular need. There seems to be some kind of dual motivation where, on the one hand there is a “vague and not eloquently formulated sense of need” and on the other, the desire to learn something specific or to deal with a given problem (Rogers, 2002).

By “motivation” we mean “all those factors that affect patterns of behavior that are organized in a way related to a purpose”. It is the inner force that drives a person to act in a certain way. With regard to motivation for learning, we might consider the driving force that activates the individual to learn, and keeps it focused on the educational process. These factors may be either external, distinguished by inducement or pressure forces, or internal – inherent, often stemming from the internalization of external factors and contributing as an internal impulse or desire to make a decision regarding a change in one’s learning. In a classic research attempt in 1965, Johnstone and Rivera categorized the motivation of the participants in their research sample as follows (Leis, Tanner & Arnett, 2009; Vergides, 2003):

- search for new employment,
- promotion in current working environment,
- further updating,
- recreational leisure,
- home-centered occupations,
- coping with daily routine,
- making new acquaintances,
- escape from the routine of everyday life,
- something else.

Table 1. Defining the reasons for participating in adult programs  
(Data from the European-wide Eurostat research in 2007.  
Percentages in total are given for the European Union and Greece.)

Motivation reasons for participation in adult education programs	Greece %	E. U. %
Acquiring knowledge and skills relating to an interesting subject	76.7	32.0
Better performance of work tasks and/or better salary- earnings	74.8	44.4
Acquiring knowledge and skills useful in everyday life	52.4	25.5
Obligatory acquisition of a certificate	48.6	10.1
Increasing the probability of finding a job or changing a profession	25.5	11.6
Making acquaintances with young people or simply for entertainment	20.6	8.8
Obligatory participation	18.1	21.5
Reducing the risk of becoming unemployed	16.0	12.3
Starting one’s own business	7.9	3.3
Other reasons	4.3	6.2

The Table 1 presents the findings of a pan-European research, conducted by Eurostat from 2007 to date, whose aim was to identify motivation for participation in adult education programs. In the first column the figures of the Greek sample are sorted in descending order and the pan-European average is to the right. The analysis of the data shows that in Greece over 75% associates their participation in adult education programs with searching for knowledge and skills relating to an interesting subject, but also with reasons relating to working issues like better performance of work tasks and advancement. At the same time, another 25.5% is found to have reported that they would be involved in training with a view to find a new job or change a profession, whereas 16% would do so, so as not to lose their current job, and about 8% would act accordingly so as to acquire the necessary qualifications in order to set up their own business.

Approximately 50% consider that it is important to acquire knowledge and skills for everyday life but also because it is compelling either in the sense of obtaining a certificate (48.6%) or as a workplace requirement (18.1%). Finally, 20.6% would be involved in a program aspiring to new acquaintances, while another 4.3% would do so, for a number of other reasons.

#### 1.4 *Participation restrictions*

Adults very often face difficulties that prevent their participation in educational programs as most of them have a lot of commitments and their living conditions and social roles are complex. These restrictive factors can be divided into three main categories, the first one including factors related to the organizing of the educational process, the second one including those dealing with the individuals' social commitments and duties, and the third category which involves internal obstacles related to the personality and psychology of those in question (Kokkos, 2005). In particular, in the first category there is a grouping of all those factors that refer to the organization of educational activity and include issues related to (Kokkos, 2005; Vergides, 2003; Roger, 2002; Courau, 2000):

- the place where the training takes place, and also the state of the property, but more importantly the distance the candidates would have to cover, especially when the use of a car or a means of mass transport is required;
- the cost of tuition fees, of educational materials or even that of the transportation of the trainees;
- the timing and, in particular, the total duration of the program and of the meetings, as well as the implementation period, the frequency and the scheduled time of the meetings;
- the facilities available that ensure comfortable living and effective attendance;
- materials and means, the absence of which may downgrade or even invalidate the benefits of education;
- the general conditions alluding to the state of the site (noise, heat, etc.) up to the number of participants and the quality of the trainers themselves;
- the selected teaching and assessment teaching methods, especially when these are familiar to the interested parties, though they may appear to be extremely demanding and "alien" to their educational habits and expectations;
- coordination, the absence of which may not only undermine the educational process but also cancel all educational objectives;
- the support provided during the educational process as well as when procedural matters occur, which will moderate the insecurity and anxiety of the participants and make their attendance more efficient;
- information on the existence of educational programs, on the curriculum and on all the necessary details, which will consequently increase interest and reduce stress and negative emotions which are caused due to the lack of knowledge regarding the characteristics of an educational program.

The second category includes restricting factors related to the commitments and duties of adults, which are relevant to their diverse roles, that are in particular summarized to the following (Kokkos, 2005; Malach, 2003; Vergides, 2003; Courau, 2000):

- adult occupational obligations, which under certain circumstances may cause fatigue, minimize leisure time and result in loss of mood;

- the occupational status, since, because of its significance it may have an impact on lifelong learning, because if the adult is currently employed he/she may be involved with issues mentioned earlier but if the adult is unemployed issues of different nature may arise such as bad psychology, difficulty in programming etc.;
- the professional position occupied by an adult because it is likely to have a negative impact either physically or psychologically, taking up a lot of their time, keeping them away from their place of residence or even not allowing them to stay in a particular place for a long period of time. It has also been found that the type of profession significantly affects people's learning abilities as work improves the abilities of individuals in general. For example, professions that require intellectual work help individuals to strengthen their mental and learning faculties (Kapsalis, 2000; Tsiora & Euclid, 1997);
- the marital status which affects mostly women in our country, Greece, mainly in single-parent families, as there are not always the necessary facilities available for childcare so that mothers would easily participate in an educational program;
- the financial condition of the people concerned, especially during the last period of the financial crisis, as this, on the one hand, prevents them from participating, especially when tuition fees are required, and on the other hand, disrupts the individual and suspends their participation;
- the support which an adult can have from their family background, work, and organized or non-governmental institutions;
- the roles that a person has taken over of their own free will or by law within the social framework which they often tend to increase their responsibilities leading, as a result, to the reduction of leisure time or even to non-participation, as in the case of military service;
- situations of social exclusion where people are on the fringe of society by being in penitentiary, nursing or other institutions or even totally shut out without having access to or being given the opportunity to participate in educational processes.

The third category refers to the internal obstacles a person encounters, mainly because of their personality, psychological state and physical condition, which more specifically comprises the following (Kokkos, 2005; Vergides, 2003; Dimitrakopoulos, 2005; Kleftras, 2000; Courau, 2000):

- reasons related to demographic features such as gender, age, level of education, lack of prerequisites, etc.;
- reasons relating to their intellectual inefficiency;
- health reasons, as in the case of contagious diseases, mental illnesses, substance addiction, disabilities, etc.;
- prior knowledge, values and perceptions, to which adults adhere, invest emotionally, and consequently refrain from engaging in procedures that can challenge all these elements, because that indirectly would mean questioning their own personality;
- other personal reasons, which may be based on previously mentioned cases or on current circumstances;
- psychological factors, and in particular a combination of the unknown and the fear of failure, which is often reinforced by pre-existing negative school experiences, that threaten the prestige of adults, increase the pressure they feel on account of various obligations they are entangled with, and in the end, form a negative perspective regarding their participation in corresponding educational programs.

On a quantitative level, analyzing the data from the Eurostat survey, with reference to the constraints the adults encounter as far as their participation in educational programs is concerned, we see that for 20.4% of the Greeks asked, the main deterrent is the lack of time due to family engagements. For 10.2%, the constraints are due to the working environment and, in particular, due to overlapping programs. One third of the sample considers the economic factor to be more significant, while for 7.8% of the participants it is the absence of programs held at close range. Around five per cent (4.8%) of the respondents report having no access to a computer or internet. Almost sixteen percent (15.9%) think that the most important inhibiting factors are (a) health reasons with all the constraints that would follow on account of them, (b) the negative experiences they had when at school, and (c) the poor support they have from their family and work environment, as well as the inadequate organization (Eurostat, 2016).

Table 2. The reasons for blocking participation in adult programs  
(Data from the pan-European Eurostat research in 2016.  
Percentages are given for the European Union and Greece.)

Reasons obstructing participation in adult education programs	Greece %	E.U. %
Lack of time due to family engagements	20.4	7.6
Overlapping programs between education and work	10.2	8.9
High cost	7.3	6.0
Absence of programs held at close range	2.2	1.2
Absence of suitable programs	7.8	2.2
Health problems or difficulties related to age	9.7	3.4
Negative experiences from school life	5.3	6.3
Insufficient support and organization	0.9	2.2
No access to a computer or internet	4.8	0.2
Other personal reasons	7.2	3.3

## 2. Method

### 2.1 *Empirical research to identify the reasons that motivate and obstruct adult participation in lifelong education programs*

The survey is quantitative with a questionnaire and its main objective is to identify all those parameters that can influence the participation of adults in lifelong learning programs. The research tool was tested during the pilot application for its validity and reliability. In order to ensure the validity of the questionnaire, following the theoretical study of this question, a thorough selection process of the questions was conducted, to ensure that all aspects of the subject are covered and are easily understood, thanks to their accurate wording, by the respondents (Moustakas, 2017). For this reason closed-type questions were constructed using Likert-type scales, which ensure greater validity than open-ended questions (Cohen et al., 2000). In addition, a validity check of the content was carried out during the pilot research by experts both from the University of the Aegean and Adult Education institutions of the island.

More specifically, measurements about the apparent validity and validity of content were made by a group of experts, indicating that the questionnaire measures what it was originally intended for, with the use of appropriate questions (sum.> 4). As far as the reliability test is concerned, the Cronbach internal cohesion index [Alpha] was used. The Internal Cohesion Index constitutes a very significant reliability indicator of a research tool. It demonstrates the degree of homogeneity of questionnaire questions and assesses to what extent its questions form a reliable research tool (Moustakas, 2017). The reliability check of internal coherence was conducted to check the degree of homogeneity of questions and possibly to remove questions that disrupt the cohesion of the research tool and this process was repeated in the final sample values too.

According to the Cronbach-A index of the main survey, the scale referring to the motivation reasons presents a ratio 0.786 and that of the blocking reasons is 0.761, both of which indicate high levels of internal cohesion reliability (Roussos & Tsaousis, 2011).

The research population was defined as the total population of the island of Rhodes ranging from 15 to 60 years of age, with about 78,000 inhabitants. The sample according to size and demographic data of the population was set at 1,500 of which about 1,100 completed questionnaires were finally collected (Andreadakis & Vamvoukas, 2005). According to the population's stratification data, the questionnaire distribution strategy involved the whole island focusing mainly on the island's schools.

Exploratory research questions seek scientific answers on whether respondents' views on motivation and obstruction of their participation in adult education programs, vary according to age and gender.

With reference to the results of testing the relevance of motivation and obstruction reasons to gender and age, a regularity check for the values of the research variables was performed initially and then, the corresponding statistical criteria were used: (a) the parametric t-test criterion for independent samples, for gender, wherever the conditions were fulfilled, while for the rest the non-parametric Mann-Whitney and (b) the parametric One-way ANOVA for age, where the conditions were met, and the nonparametric Kruskal-Wallis for all the rest. In all cases the level of significance was 0.05 (Moustakas, 2018).

## *2.2 Identity of the sample*

According to data from the statistical analysis, the sample of 1,088 residents of Rhodes Island consists of 522 men (48.0%) and 566 women (52.0%). With regard to age, 161 respondents (14.8%) stated they were under 20, 249 (22.9%) between 20-29, 327 (30.1%) between 30-39, 241 (22.2%) between 40-49, 87 (8.0%) between 50-59 and 23 (2.1%) over 59 years of age. Analyzing the figures relating to the educational level of the sample individuals it appears that 16% did not attend or did not complete their studies in high school, 47% graduated successfully from this level and 37% pursued further studies either in an Institute of Vocational Training (IEK) or in tertiary education either on undergraduate or postgraduate level.

## *2.3 Descriptive research results - Participation in Lifelong Learning Programs. Reasons for motivation and obstruction.*

This section presents the research data regarding the respondents' degree of concordance on specific proposals concerning their motivation for participation in lifelong learning programs (Nikolaides & Dzubinski, 2016). According to the respondents' statements, the predominant reasons for their participation in such programs are referring to their personal pleasure related to their hobbies and interests (average degree of concordance 3.93), work-related reasons (average degree of concordance 3.86), social reasons (average degree of concordance 3.79), their tendency to share their concerns with others (average degree of concordance 3.75) and economic reasons (average degree of concordance 3.73).

The next set of questions, the research findings of which are presented, refer to the reasons that may actually limit or obstruct the participation of adults in education programs. Questions are divided into subgroups depending on the content of the inhibitory reasons they refer to, for which an index is calculated which expresses the degree of impact of the respective category:

- Educational/Organizational Reasons – 3.81
- Labor reasons – 3.56
- Economic reasons – 3.27

- Family reasons – 3.23
- Personal reasons – 3.04
- Social reasons – 2.72

From the analysis of data it is found that respondents consider both the educational – organizational indicator and that of the workplace to be really important, while on the contrary they attach less importance to the social one. The impact of personal reasons on the process of blocking participation is (average degree of concordance) 3.04.

Respondents consider that lack of preconditions and overlapping programs to be serious reasons (average degree of concordance 3.62), while the absence of means of transport, health grounds, age as well as their general attitude to lifelong learning have a minor impact on their participation in similar programs (average degree of concordance 2.52-3.07). In the second group where there is reference to family reasons the corresponding indicator is 3.23. From the analysis of the data of the corresponding questions it seems that lack of time due to family engagements (average grade 4.17) is of great importance. Less significant, as a constraint, is the lack of support from the family environment (average 3.21), as well as the refusal of the guardians (average 2.40). Third in line is the group, which is related to economic reasons, the impact of which appears moderate with a factor of 3.27. According to the statements of the participants in our research moderate significance is attributed to the reason for being unaffordable (average degree of concordance 3.46), to the lack of financial resources (average degree of concordance 3.63) and even less significance to the absence of means of transport (average degree of concordance 2.70). The next category refers to factors of a working nature, which may have a negative impact on the participation of adults in educational programs and has a factor of 3.56. According to the sample's statements, moderate importance is attributed to limited work-related utility (average degree of concordance 3.46) and to lack of support from the employer (average degree of concordance 3.66).

#### *2.4 Results of the survey based on inductive statistics*

The descriptive results of the survey have indicated clearly that the views of the respondents are diverse in many cases, and as a result it is very important to check to what extent there is a differentiation in their statements in relation to various demographic and other elements. Of course, it is then interesting to interpret and attempt to understand those elements in which significant differences are found to enrich the general debate on adult education. The values of the variables of interest are examined in relation to each and every other of the questions in the questionnaire in order to determine to what extent there are statistically significant differences. At this point, it should be noted that for reasons of economy only those cases where statistically significant differences have been identified are presented in this research paper. The results of the comparison of the survey data on gender and age are presented below.

##### *2.4.1 Result study according to gender*

The following table presents explicitly the extent to which respondents agree on each of the proposals, in order to further analyze their views on motivation, so as to attend adult education programs, for which statistically significant differences appear.

The results indicate that women consider labor (average 3.92 and 3.81) and economic (average 3.80 and 3.64) reasons more important than men as motivation factors ( $t(1072) = -2.290$ ,  $p=.022$  and  $t(1066) = -2.474$ ,  $p=.014$  respectively). Regarding more specific motivation reasons, women say they are motivated to a greater extent (average 3.80) than men (average 3.69) by “their tendency to share their concerns with others” ( $t(1073) = -1.966$ ,  $p=.050$ ), and even for “personal pleasure related to their hobbies and interests” ( $t(1075) = -2.037$ ,  $p=.042$ ).



With reference to the varied statements coming from people of different gender, regarding the reasons for obstructing the attendance of adult education programs, in which statistically significant differences appear, it is found in all cases that women consider the following specific factors as more important than men. In particular, women (average 3.34) state that they consider their economic and family reasons to be more of an impediment than men do ( $p=.318$ ) ( $t(1083)=-3.173$ ,  $p=.002$  and  $t(1083)=-3.381$ ,  $p=.001$  respectively). As far as the rest of the factors in these categories are concerned, they mark out the high cost of programs (average 3.54-3.37,  $t(1079)=-2.544$ ,  $p=.011$ ), the lack of time due to family engagements (average 4.24-4.10,  $t(1082)=-2.701$ ,  $p=.007$ ), the lack of support from the family environment (average 3.28-3.13,  $t(1079)=-2.084$ ,  $p=.037$ ) and the refusal of guardians for cases in which they can express an opinion (average 2.47-2.32,  $t(1059)=-1.997$ ,  $p=.046$ ).

In terms of personal reasons, the most significant are health reasons, which women (average 3.16) consider to be more important than men (average 2.96) ( $t(1064)=-2.709$ ,  $p=.007$ ) and the lack of means of transport (average 2.79-2.60,  $t(1059)=-2.648$ ,  $p=.008$ ). Finally, with regard to the reasons relating to the organizing body and the organization of the programs in general, they mark out the existence of overly long programs (average 3.47-3.30,  $t(1056)=-2.835$ ,  $p=.005$ ), their programming at inconvenient hours (average 3.82-3.67,  $t(1060)=-2.678$ ,  $p=.008$ ), the poor conditions (average 3.21-3.09,  $t(1050)=-2.001$ ,  $p=.046$ ), the lack of programs held at close range, ( $p.386-3.69$ ,  $t(1064)=-2.970$ ,  $p=.003$ ) and the little information about their conducting (average 3.96-3.75,  $t(1064)=-3.260$ ,  $p=.001$ ).

#### 2.4.2 Result study according to age

From the analysis of the question data, which shows a statistically significant difference, it is found that the younger participants appear to be motivated to a greater extent by their peers, up to the age of 29, and then less in inversely proportional way depending on the age increase ( $f(4/1072)=6.235$ , average: (<20) 3.15 – (20-29) 2.79 – (30-39) 2.77 – (40-49) 2.69 – (>49) 2.54,  $p=.000$ ). A statistically significant difference is, also, found in the statement “to share their concerns with others”, where the same model is presented with a gradual increase depending on age up to the age range of 40-49, and finally notably limited among older individuals ( $H(4/1070)=11.328$ , average: 3.51-3.75 – 3.81-3.86-3.69,  $p=.023$ ). Also, with the statement “because it is a current trend” whose degree of motivation increases in inversely proportional way to the increase of age ( $H(4/1072)=10.846$ , average: 2.46-2.23-2.1-2.1-1.99,  $p=.028$ ).

Regarding the differentiations in the degree of significance of the reasons for obstructing participation in relation to age, personal reasons are distinguished and, in particular, age limitations, where there is a reduction in the average as the age increases ( $f(4/1048)=4.285$ , average: 2.88-2.54-2.45-2.44-2.42,  $p=.002$ ) and also psychological reasons, such as anxiety, fear, low self-esteem etc., which they, too, do reduce as the age increases ( $f(4/1061)=2.067$ , average: 2.84-2.75-2.59-2.59-2.50,  $p=.043$ ).

With regard to family – social reasons for blocking participation, the selection of the refusal of guardians and the general negative attitude of the social environment is limited as the age increases ( $f(4/1056)=2.436$ , average: 2.57-2.45-2.38-2.36-2.12,  $p=.046$ ) and ( $f(4/1052)=3.668$ , average: 2.59-2.42-2.34-2.30-2.12,  $p=.006$  respectively).

The limited work-related utility of educational programs is a restrictive factor, especially among those younger than 20 (average 3.60) and between 20-29 years of age (average 3.55). It is then limited as the age increases but grows significantly among people aged 49 and over (average 3.54), ( $f(4/1072)=3.458$ ,  $p=.008$ ).

Finally, with regard to the reasons related to the organizing party and the organization of the programs in general, “the lack of educational programs” is a factor which becomes more

significant as the respondents' age increases ( $f(4/1063) = 2.776$ , average: 3.94-4.01-4.13-4.17-4.23,  $p = .026$ ), “scheduling lessons in inconvenient days and hours”, which seems to affect adults more as age increases ( $f(4/1057) = 6.658$ , average: 3.60-3.62-3.77-3.79-3.93,  $p = .049$ ) and “the lack of suitable educational structures” which affects participants in the study according to age ( $f(4/1063) = 2.465$ , average: 3.95-4.05-4.15-4.16-4.19,  $p = .043$ ).

### 3. Discussion

Following the analysis of research data, it is evident that citizens feel the lack of educational programs and are favorably disposed to lifelong learning. From the comparative research implementation of educational programs to different age groups, it seems that programs for young people could be made suitable for adults with the appropriate modifications.

From the analysis of the demographic data as it is conducted in this research, the independent “age” variable shows 46.5% differences in the variables related to lifelong learning, whereas the “gender” shows 36.5%. In particular, from the analysis of the research data, 54 statistically significant differences related to age were identified as well as two dominant trends of differentiation, according to which the differences are increased or decreased depending on the age of the respondents.

In particular, referring to reasons for obstructing participation in educational processes of this nature, the absence of structures and programs is the one chosen to a larger extent by older people, whereas psychological reasons, refusal of guardians, various social parameters and age restrictions are the type of inhibiting reasons chosen by the younger respondents (Reis, 2008).

In the assessment section of the indicator for lifelong learning, although there is no differentiation in total, in individual statements men tend to believe strongly that continuous education reduces the risk of dismissal and at the same time upgrades the image of the employee. On the other hand, women believe strongly that continuous education is a more enjoyable engagement, a good example to follow for their children and something that increases their self-esteem, while they disagree more with the view that the employee should participate in a training program only after the employer's persistence in doing so (Jung & Cervero, 2010; Reis, 2008; Boshier & Collins, 2006).

The present research covered the region of the island of Rhodes. It highlighted the complexity of the factors that are conducive or inhibitory to the participation of individuals in educational programs in their lifespan. Taking into account the data provided through the statistical analysis it could be applied to the country as a whole, if conducted in different parts of diverse socioeconomic background, in order to assess the significance of adult participation in lifelong learning programs so as to enhance not only personal development but also progress and economic growth in general.

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#### Conflict of interest statement

The author declares that there is no conflict of interest.

## References

- Andreadakis, N., & Vamvoukas, M. (2005). *Guide to the preparation and compilation of a written research paper*. Athens: Atrapos.
- Bergevin, P. (1995). The adult, his society and adult education: An overview. In: S. Merriam (Eds.), *Selected writings on philosophy and adult education*. Florida: Krieger Publishing Company.
- Bigge, M. (1990). *Learning theories*. Athens: Patakis.
- Boshier, R. (1980). *Towards a learning society*. Vancouver: Learning Press.
- Courau, S. (2000). *The basic "tools" of adult educator*. Athens: Metaihmio.
- Dimitrakopoulos, G. (2005). Who's afraid of "Local Agenda 21"? In: A. Georgopoulos (Ed.), *Environmental Education. The new civilization that emerges*. Athens: Gutenberg.
- Edwards, R. (2003). Lifelong learning: A recurrent education? In: J. Field & M. Leicester (Eds.), *Lifelong Learning. Education across the lifespan*. New York: Routledge Falmer.
- Goad, L. (1984). *Preparing teachers for lifelong education*. Hamburg: UNESCO Institute for Education and Pergamon Press.
- Jung, J., & Cervero, R. (2010). The social, economic and political context of adult participation in undergraduate programs: a state-level analysis. *International Journal of Lifelong Education*, 21(4), 305-320.
- Kapsalis, A. (2006). *Educational psychology*. Athens: Kyriakidi Bros SA.
- Kleftaras, C. (2000). Cognitive specificity of depression and anxiety: Methodological issues and research data. *Psychology*, 7(1), 46-62.
- Kokkos, A. (2005). *Adult Education. Detecting the field*. Athens: Metaihmio.
- Koronaïou, A. (2002). *Educating outside school. The contribution of audiovisual media and new technologies*. Athens: Metaihmio.
- Leis, J., Tanner, J., & Arnett, J. (2009). Learning and development during the first stage of adulthood. In: M. Smith & N. DeFrates-Densch (Eds.), *Handbook of research on adult learning and development*. New York: Routledge.
- Malach, A. (2003). Black and other ethnic minority communities learning needs. In: J. Field & M. Leicester (Eds.), *Lifelong Learning. Education across the lifespan*. New York: Routledge Falmer.
- Mezirow, J. (2007). Learning to think like an adult. Basic concepts of transformation theory. In: J. Mezirow et al. (Eds.), *Transforming learning*. Athens: Metaihmio.
- Vergidis, D. (2003). Designing adult education programs for vulnerable social groups. In: D. Vergides (Ed.), *Adult Education. Contributing to the specialization of executives and trainers*. Athens: Greek Letters.



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