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<table>
<thead>
<tr>
<th>Title</th>
<th>Abstract</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evripides Zantides Aspasia Papadima</td>
<td>Depicting time: Visualizing the duration of existence and facts in past, present and future</td>
<td>5-19</td>
</tr>
<tr>
<td>Charoula Statthopoulou Darlinda Moreira</td>
<td>Diversity in European school populations: A study in Portugal and Greece with particular attention to Romany cultures</td>
<td>20-31</td>
</tr>
<tr>
<td>Anastasia Kappatou</td>
<td>Investigating young people’s online discussions from a linguistic and sociological perspective</td>
<td>32-43</td>
</tr>
<tr>
<td>Eriola Qafzezi</td>
<td>Linguistic phenomena observed in translating multiple sentences from English into Albanian: The case of Alice’s Adventures in Wonderland</td>
<td>44-57</td>
</tr>
<tr>
<td>Anna Fterniati Argiris Archakis Villy Tsakona Vasia Tsami</td>
<td>Media and literacy: Evidence from elementary school students’ literacy practices and the current teaching practices in Greece</td>
<td>58-70</td>
</tr>
<tr>
<td>Iliadou-Tachou Sofia Kalerante Evaggelia Tsigeni Paraskevi</td>
<td>PASOK’s education policy about the transferring of Greek students attending Foreign Universities (1982-1991): A Study Case – Florina’s Pedagogical Academy</td>
<td>71-85</td>
</tr>
<tr>
<td>Charalambos Lemonidis Anastasia Kaimakami</td>
<td>Prospective elementary teachers’ knowledge in computational estimation</td>
<td>86-98</td>
</tr>
<tr>
<td>Aggeliki Tsapakidou Argyrios Kyridis Eirini Sivropoulou</td>
<td>The effect of a learning group in the understanding of the structure of illustrated short stories for children of a preschool age</td>
<td>99-109</td>
</tr>
<tr>
<td>Panagiotis Giavrimis Makrina Zafiri Vasillis Charitos Adamantios Papastamatis</td>
<td>The conception of the “self” in immigrant children: The case of Albanians in the Greek educational system</td>
<td>110-121</td>
</tr>
<tr>
<td>Christos Tzikas</td>
<td>The social conditions of educational changes. The case of primary education in Greece 1878-1880</td>
<td>122-138</td>
</tr>
</tbody>
</table>
Depicting time: Visualizing the duration of existence and facts in past, present and future

Evripides Zantides
Cyprus University of Technology, Department of Multimedia and Graphic Arts
evripides.zantides@cut.ac.cy

Aspasia Papadima
Cyprus University of Technology, Department of Multimedia and Graphic Arts
aspasia.papadima@cut.ac.cy

Abstract
Time as duration, as a unit of measurement of duration, as a natural unit to express the depiction of individual moments, phenomena and events, has constituted a philosophical and scientific challenge to humanity. The conversion and organization of the notion of time into a visual form is a continuous experimental process. This study presents a theoretical and historical overview of the depiction of time, and addresses the visualization of duration from analog to digital form, and the everyday, commercial and conjectural mapping of time by analyzing specific audiovisual examples from a theoretical and visual-arts historic perspective. Through philosophy, religion, fine and applied arts, as well as modern audiovisual communication, various ways of signaling time are selectively presented and discussed.

Keywords: Time, visualization, depiction, visual arts history

1. Background information
It is rather ambitious – and certainly time-consuming – to attempt to define time fully, accurately and comprehensively. Why is such a notion, which is fundamental and vital to the existence, so cumbersomely defined? Why attempting to define time becomes awkward and difficult to accomplish although our existence is governed by the principles of time? Perhaps because time itself is practically “timeless” as it has no beginning and no end, and lasts for eternity. Theodosiou and Danezis wonder: “Is the essence of time a countable magnitude in the traditional sense of the word or does any method of counting it – regardless of how much it facilitates our pace of life – limit and basically downgrade the broadness of its real dimension?” (Θεοδοσίου and Δανζηθσ 1994: 17).
However, although defining time in absolute terms on a theoretical and philosophical level seems unattainable – exactly like time is – its visualization from antiquity to contemporary creative expression presents a great variety and particular interest with respect to form, aesthetics and type.

2. Aims of the Research and Sample
The existing study aims in providing a general historic review on the visualisation of time as well as analyzing the way that this notion is represented and formed through selected examples from Fine and Applied Arts. The samples are taken from various historical periods of western civilization as well as contemporary ones, looking at Music, Sculpture, Painting, Advertisements, Interior spaces, Products, Cinema and Film.
3. Research Methodology

Purposive Sampling was used for the selection of the sample, a method which aims to provide rich information for the issues we needed to discuss. Artworks, advertisements, objects and films were not selected randomly, but with reference to the manner that time is intensively visualised to convey its meaning and presence.

4. Historic review

4.1 Time in antiquity: symbolism and philosophical quest

In Ancient Greece, time and time-related natural phenomena were personified as Deities. Cosmic time is symbolized by Titan Cronus, father of the Gods, who devours his children. In mythology, Chronos appears, who is placed in the beginning of time according to the Orphic myth, and occasionally Chronos is depicted with wings on his back since he never stops moving.

The Horae (fig. 1), goddesses of seasons and the natural portions of time, are the daughters of Zeus and Themis who “come and go in accordance with the firm law of the periodicities of nature and of life” (Kerenyi 1951: 101f). Primogenitor Helios, who creates all the days of human life, has two daughters who guard his three hundred and fifty cows each of which correspond to the days of the year. The multiform lunar deity Selene with its obvious transformations and the stars appearing as children diving into the sky in front of Helios’ chariot are some of the symbolic illustrations of time in Greek mythology (Kerenyi, 1995).

figure 1: The Horae

Time has preoccupied many philosophers and scholars since antiquity. For Plato, time is the reflection of eternity, and his perception of time is presented in the work Timaeus: “he [the creator] resolved to have a moving image of eternity, and when he set in order the heaven, he made this image eternal but moving according to number, while eternity itself rests in unity; and this image we call time.” (Plato, Timaeus 37d)

Aristotle’s perception of time relates to movement. So he defines time as “a number of motion with respect to the before and after” (Physics IV 219b1–2 quoted in Roark, 2011: 1). It is Aristotle who first established that the movement and direction of time is from
past to future, through present, and the relation of time with movement (Physics VI 234a10, 234a16, 234a31, 234b20 quoted in Roark, 2011: 2).

**4.2 Time in Christian religion: symbolism, cyclic sequence and religious practices**

In the 4th century A.D., Saint Augustine, father of the Catholic Church and philosopher, influenced by Plato and Aristotle’s theories, defines the notion of time as past, present and future. In his Confessions, he states that “there be three times; a present of things past, a present of things present, and a present of things future” (Augustine, Confessions XI-XX), and that without this clear division we cannot define time. However, “if nothing passed away, time past were not; and if nothing were coming, a time to come were not; and if nothing were, time present were not” (Augustine, Confessions XI-XIV), so the present is the only point linking past to future. This difficulty is overcome by reference to intellectual memory where all areas of time are found. Thus, time acquires its real dimensions in length and shortness. Nevertheless, eventually, time itself is not satisfied by time-related theories, and acknowledges its weakness to solve the conundrum of time, acting ignorant of the reply to the question “what is time?”. As it seems, not even religion managed to clearly define time, although in almost all religions worldwide there is the symbolism of creation, i.e. the beginning of time and re-creation on another level, the relief that comes with the end of finite time. The symbolism of time in the Holy Scriptures is vital. The original sin delineates the end of eternal time and at the same time the beginning of the finite – mortal time with a specific beginning and a predetermined end. On the other hand, doomsday and the Second Advent define the end of mortal time and the beginning of eternal time. The symbolism of time in religion has been abundantly illustrated in visual communication throughout the centuries.

Time in the ritual of orthodox Christian faith is delineated by successive recurrent fasting periods that correspond to religious events and festivities, and are also determined by nature’s season practices, such as the nurturing of newborn animals. In this framework, Lady Lent (Kyra Sarakosti) constitutes a peculiar calendar for the period of the Lent. Lady Lent usually has the form of a nun without a mouth so as not to eat because she fasts, with her hands folded in prayer, and seven legs each for each week of Lent before Easter.

**4.3 The organization of time in calendars**

Humans, from the very early stages and clearly for practical reasons, attempted to define, delineate, calculate, even control time in the framework of their own frame of mind. By monitoring natural phenomena and the course of nature, they soon realized the alternations, cyclical sequence, and patterns which emerge through the course of time. The organization, visualization and partition of time into equal intervals aiming to create a common pattern to formulate time reference and continuity, were one of the most complex conundrums in the history of human civilization. As Falk (2009) mentions: “Over the millennia, different civilizations tried every possible trick for reconciling these incongruent cycles.”

Since Prehistoric Age, there have been indications of lunar calendars, represented as notches carved on bones or sticks of wood (LaViolette, 2005).

Samples of the visualization of time organization in relation to astronomy come from ancient Egypt, as the astronomical ceiling of Senenmut private tomb TT 353 (fig. 2), built
in year 16 of Hatshepsut’s reign. It is the mapping of a lunar calendar, representing northern and southern skies, decanal stars, planets, also marking the hours of the night. (Leser, 2006)

**figure 2:** Part of the Astronomical Ceiling in Senenmut’s tomb TT 353

The most important functional calendars, such as the Babylonian, the Maya calendar, the Julian or Old calendar dated back to Julius Caesar’s era, 46 B.C., superseded by the Gregorian or Modern calendar in 1582 A.D., the Hebrew calendar or the new Islamic calendar, are all based on the movements of planets, the Sun, the Moon and the Earth, and the relations with each other. (Robinson, 2007)

The Gregorian or Modern calendar which superseded the Julian or Roman or Old Calendar managed to compromise the difference in the duration of a lunar month and a solar month, and to balance the analogies and inconsistencies of the time periods caused by the movement of the Earth and the Moon. (Robinson, 2007)

Modern graphic design offers remarkable works of the visualization of time, through monthly/yearly calendars, with humour, creativity and other insightful ways of presenting and literally depicting time, such as the calendar which is painted slowly as time passes, or the scratch calendar where the days over are scratched off.

A calendar from the perspective of astrology visualizes time using interesting symbolisms. Time is depicted cyclical, divided in seasons with names and symbols which are based on the movement and relation of the planets. The astrological symbols correspond to specific time periods, and have been standardized on an abstracted design, creating standard visual conventions. However, their stylistic design allows more creativity. The symbol of Capricorn, for instance (fig. 3), besides the specific features of the character assumed to assign to the person who is born under the sign of Capricorn, also refers to a specific relation among the planets and their movements in a given interval as this is determined by the calendar followed. Moreover, the symbol refers to the different ideological, social, age groups as these are expressed through the design and aesthetics of each sign separately. So its symbolism reflects many levels of signification and content.
5. Historical time

As time is depicted mainly as cycle in the calendars so, in history, it emerges from cyclical movement, and its visualization achieves the synchronization of calendar time with historical time. Expressions such as “history repeats itself” or “the end of a cycle” inspire a sense of cyclic continuity through recurrence, rhythm, “historical rhyming” as Zerubavel calls it. Zerubavel (2004: 47) also notes that “despite the difficulty of compressing thousands of years of history into a 365-day holiday cycle, we nevertheless try to combine our linear and circular visions of time in an effort to somehow “synchronize” our annual holidays with the historical events whose memory they are designed to evoke.”

According to Dohrn-van Rossum (1996: 3), “[t]he various ways in which historical change is perceived – as cyclical movement, as rise and fall, as unending progress, as accelerated or delayed change– all contain different notions about the relationship between past, present, and future.”

There are many ways to depict historical time: vertical or horizontal arrangement, cyclical or spiral arrangement, combination of text and image, images, symbolic representations, or graphs.

Family historical time is symbolically represented by visualizing verbal symbolisms related to origin. Family roots relate to plant kingdom, so there are more or less decorative, stylish, pompous or serious genealogical trees. At the same time, representing kinship schematically allows further design processing to illustrate genealogical proximity in relation to time. (fig. 4)
6. Mechanisms and depiction of time calculation

Ancient civilizations made a great contribution to the deciphering of the mystery called Time by inventing astronomical artifacts such as astrolabe, protractor, hourglass, sun clock, and other inventions that have foregrounded one of the most important inventions in the history of technology, the clock. Special reference is made to the Antikythera mechanism, an accurate artifact of time calculation, of the 1st century B.C. It is one of the most famous artifacts of the antiquity, which, according to its then contemporary representations, seems to have important information engraved on it in letters. It is considered the father of all mechanical clocks since its operation is based on a 30-gear system. According to Professor De Solla Price, it is a calendar mechanism which calculates exactly the movements of the Sun, the Earth and the Moon in its different phases. (Theodosiou-Danezis, 1994)

As the experience, perception and realization of time are broad concepts, there are also some peculiar cases of time illustration: a first token is the biological clock (fig. 5) of Carolus Linnaeus (1707-1778), botanist, physician and zoologist. It is a flower clock which takes advantage of flowers, that open and close at particular times of the day to predict the time.
Graphs of the circadian rhythms of the human organism are also another case of visual illustration of time based on its natural course.

7. Depicting time in Fine Arts

In music, time does not express only sound but also the lack of sound. The design of a note as a graphic character in relation to the positive-negative space it includes, its ascenders and descenders, the size and stroke weight, corresponds to a specific time and its subdivisions (fig. 6). In the same framework, special symbols are designed for pauses that define the lack of sound in a specific time. These are visual conventions which we recognize and understand after receiving special education. Similar visual conventions to visualize time are found in Byzantine music (fig 7). They are designed differently and constitute a special language of communication in written discourse.
figure 7: Transcription of psalmody of echos protos in the Anastasimaron of Panagiotes the New Chrysaphes (17th century)

In static art, time is symbolically indirectly illustrated. On Laocoön and His Sons (or “Laocoön Group”) – a monumental sculpture in marble of the Hellenistic period depicting the myth of the Trojan priest and his sons being killed by snakes sent by goddess Athena to avoid exposing the ruse of the Trojan Horse – the sequence of events is displayed indicating a time sequence in less immediate time (fig.8). The male figure on the right is fighting for his life and seems to still have hopes for survival when the central figure expresses the peak of the drama and the anguish of death, while the son on his left is already dead. This passage from life to death indicates the time sequence by purely sculptural means.¹

figure 8: Laocoön Group, Vatican Museums

In Pieter Bruegel the Elder’s work Temperance of 16th century (fig. 9), various activities are depicted in relation to measurement, which, according to Robinson (Ρόμπινσον, 2007: 194), is a new psychosis that has dominated society and testifies to the existence of a particular purpose and self-control which derives from the respect of society for

¹ Thanks to Dr. Antonis Danos, art historian, for bringing it to our attention.
measurements in each era. Starting from bottom left and clockwise, various groups of people representing arithmetic, music, rhetoric, astronomy, geometry, dialectic and grammar are observed whereas in the centre there is Temperantia depicted with “five significant symbols”, which, among others, “on her head is supported the most advanced, sophisticated machine of his [Bruegel’s] era: the clock, which measures passage of time” (Klein, 1974: 19).

**figure 9:** Bruegel the Elder’s “Temperance”

Nicolas Poussin in 17th century depicts time sequence on his paintings integrating past, present and future into different levels of perspective within the same landscape. Typical examples are his works *Burial of Phocion* (fig.10 ) and *Landscape with Orpheus and Eurydice*. Steefel (1991) suggests that “…Poussin images are not really landscapes, even paysages parlantes, rather they are istoria or human actions in a visual mode set into landscapes which are their matrices but not their ends.” And again, commenting on the depicted narrative in Orpheus and Euridice, he integrates: “Similar gestures transform themselves over time and space covering the range from eloquent music-making to surprise and loss.” (Steefel, 1992). The perception and comprehension of time sequence in two dimensional depictions emerge from the decoding of the meaning of the conjectural narrative.

**figure 10:** Burial of Phocion

The Italian futurists of the 20th century attempt eagerly to depict the experience of
movement and time. Typical examples are Giacomo Balla and Umberto Boccioni’s works. These artists convey the sense of time in a dynamic way through the study and illustration of light, speed and movement.

In his famous book on photography *Camera Lucida*, Roland Barthes states that a typical characteristic of photography is its reference to a specific moment. That is, photography does not seem to be a representation of some “reality” but its genuine depiction: thus, photography seems to bypass the signifier allowing us to directly contact the signified. As Barthes (1993: 76) highlighted, such reality has above all a time dimension, so photography captures “…that the thing has been there” proving the past without the mediation of historical discourse.

If there is a real document in the photograph, this is that it never conveys what time and distance have abolished, but confirms what happened in the past. “It has been here, and yet immediately separated; It has been absolutely, irrefutably present, and yet already deferred” (ibid).

Static photography “freezes”, “captures” and “depicts” time at a specific moment, and depending on its theme and perspective can motivate the viewer to make a journey to personal moments in present, past or future time. Taking into account the various ways to communicate connotative messages as proposed by Barthes (1977) (that is, to impose a second meaning on the photographic message proper) such as trick effects, pose, objects, photogenia, aestheticism and syntax, the notion of time in terms of what may have happened or what is going to happen is, for instance, one of the main characteristics of the themes in the works of Cindy Sherman, photographer. This applies especially in her photographic representations of motion pictures.

In the exhibition *Time in Motion* (1991) in the Macedonian Museum of Contemporary Art, the theme was the illustration of duration throughout the history of photography, based on the depiction of motion and time. According to the organizers, time-lapse photography based on the moment aims at taking a sequence of successive photographs at a short interval, which altogether compose a particular idea of motion.

Time-lapse photography uses different frames on the same negative as in Eadweard J. Muybridge’s (1878) work and Albert Londe’s (1858-1917) work or successive poses gathered on the same negative as in Étienne-Jules Marey’s work or Thomas Cowperthwait Eakins’ work (July 25, 1844 – June 25, 1916). Time-lapse photography foregrounds technically the appearance of motion pictures, and is a sensational picture of reality, integrated and multifaceted at the same time, which conveys the interrupted development through a different space every time, and a translation of the notion of time into image.

Duchamp in his work *Nude descending a staircase* #2, 1912, manages to convey motion in the painting in a way that approaches a futuristic (but also partly cubic) technique and the operation mode of time-lapse photography. He achieved that through overlapping layers of motion of a body climbing down stairs.

Both technically and visually, cinema depicts time through successive (time-lapse) pictures in motion. At any moment, viewers can watch the visualization of time through a story or an event in various frameworks, that is, in ‘real’ – or not – time broadcasting. Naturally, the depiction of time itself in an already audiovisual application running at

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2 Thanks to Dr. Antonis Danos, art historian, for bringing it to our attention.
specified time, such as motion pictures or videographs, is expressed in other ways too. For instance:

a. alternation of a frame between colour and black & white
b. fast leafing through a diary
c. writing the date or the number of years back to the past, or
d. fast alternation of an image or a clock forward or backward where reference is made to past or future depending on the direction of the movement.

According to Aristotle’s philosophy (Physics IV 201a9-11), if we depict an object that moves from point A to point B, the passage and duration of time are inevitably integrated, visualized and implied in a literal and clear manner. Paradoxically, the illusion of motion and change in a static picture assigns, integrates and depicts the notion of time. In this way, a sense of a beginning of time with respective duration recurring every time we see the picture is created.

8. Visualizing time, semiotic and graphic communication

**figure 11:** Adolphe Mouron Cassandre’s poster of Dubonnet liquor (1932)

The illusion of motion and change to portray time is often used in advertising. A classic example is Adolphe Mouron Cassandre’s famous poster of Dubonnet liquor (1932), where the depiction of motion and inevitably time is used to convey a commercial advertising message (see fig. 11). Every time we see the poster from left to right, the sequential imagery repeats the idea of liquor fulfillment, not just through the man’s figure but also through typography. Another similar technique would be to compare two images, one before using a product or a service and the other after. This before-after approach often shows the passage of time with reference to ageism.

**figure 12:** Detail from a Cyprus Bank advertisement ‘Freeze time with our house-loans’

Time in contemporary societies has now been established as a valuable commodity with monetary value: time is money. Man hours, annual budgets, duration of access to the
internet, monthly compound interest on loans, parking meters, peep-shows and numerous other charges are based on time. The figurative use of time is often translated from language into image to communicate advertising messages. Time is money, waste of time, spending time, saving time, killing time, or freezing time, are only some of the examples advertisers use. see for example in fig.12 an advert with a headline ‘freeze time with our house loans’ from a Bank of Cyprus campaign in 2009. In the specific example we can also note the use of grey, white & a light-blue colours that contribute to this notion of time frost.

**figure 13: Rolex logo’**

Advertisements for watches are also very interesting to examine as they often target various age, status or gender groups. In Rolex watches the golden logo of the crown and the classic slab-serif noble font used make time look more ‘valuable’ and ‘aristocratic’. It is worth mentioning that typography as a separate semiotic system on its own, contributes to the aesthetics and the idea that is expressed linguistically through lettering. For example, we often see time-related linguistic messages in OCR-A fonts to be futuristic, in Times New Roman to be classic or refer to the present time and in gothic fonts to represent the past/old-times. TAGHeuer watches (see campaign ‘what are you made of’) depends a lot on the selection, photogeny and pose of the participated models. The linguistic messages in combination with famous icon-personalities, create a pun that connotes style, looks, finesse, fame and popularity. In contrast to the previous examples, a different visual language is usually used by Swatch campaigns which are targeted to a different audience who considers time to be “fun” and “cheap”. Swatch uses a more modern typography and aesthetics, nearer to the language of youth.

**figure 14: Vintage Religion, Jesus Christ Praying, Gethsemane Round Wall Clocks**

Although there are different factors which contribute to the formulation and perception
of what we see, traditional visualization of time is universal and does not require special conventions to learn how to do it. On a typical, analog, round clock, interpreting time is known worldwide and very often used as a means to promote messages with a variety of themes. Aesthetics and the design of a clock are usually adjusted to the place for which the clock is destined (restaurants, children’s rooms, kitchens etc). Interestingly we often come across with clocks that use religious imagery on an attempt to remind us about the spiritual aspects that ‘end or passing of time’ might have (see fig.14).

Contemporary traditional visualization of time appears mainly in two forms, analog and digital. These two audiovisual depictions assign grace to time in completely different ways: the perception of time on analog, round clocks is wider; we can see the hours, the minutes, the seconds that passed and those that follow not only in relation with past, present, future but also with how much time passed or how much time is left. The digital representation of numbers depicts only the present and the specific moment ‘now’. According to Hall (2007), the main difference between the two forms of depicting time is that the sense of “continuity” dominates analog depiction whereas in digital depiction there is no visual reference to “before” or “after”, and thus time is depicted “discontinuous”.

**figure 15:** Execution chamber with clock and outside seats

Depicting time on analog clocks in execution chambers (see fig.15) connotes in a cold manner that the flow of life stops for a human being at a particular moment, whereas for the audience attending the execution it continues and is indirectly related with what happens before and after death. So there is an apparent visual reference to time, space and the events that take place. This may confirm the sense of “continuity” reflected by analog representation. The same framework applies for analog time depicting and signaling time in labour rooms where babies come to life.

In the second form of time, digital depiction connotes the moment, the present and the most immediate. It is also used in accurate timing or countdowns assigning a sense of “expectation”, “immediateness” or “emergency” to the notion of time. Typical examples are countdown to missile launch, new-year, bomb explosion in movies etc.
9. In lieu of a conclusion

Time is running, is chasing after us, is relentless, vain but also valuable; we gain time, we lose time, we make time, we kill time, we waste time in no time. Time is analog or digital, counts human life and activity physically or virtually, provides us with pace, and we attach value to it. We experience time, we perceive time, we visualize time in many different ways. Our topic as a whole is interdisciplinary and non-exhaustive, because the endless interpretations of time are founded on scientific, philosophical or social frameworks depending on cultural and scientific backgrounds. It is integral to and inevitable in our existence. There are multiple ways of perceiving and visualizing the notion of time, based mainly on practical and organizational criteria. In the current research we present just a general idea of the many aspects about the visualization of time that exists. What is worth mentioning from our study is that the illusion of motion and change in a static 2D or 3D applications assigns, integrates and depicts the notion of time. Interestingly, there are cultural and genre codes that allude to time visualization like the switch from colour to black & white in films, the lines drawn behind cartoon characters in comics or the harp sounds in music programs.

References


Evripides Zantides, Aspasia Papadima: Depicting time: Visualizing the duration of existence and facts in past, present and future


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Brief Biographies

Evripides Zantides
Evripides Zantides is Assistant Professor in the Department of Multimedia and Graphic Arts of Cyprus University of Technology in Cyprus. He has presented papers in a number of international conferences on Semiotics, Graphic Design education, Typography and Visual Communication and has participated, with distinguished work, in refereed Art and Design Biennales and other international exhibitions. Actively involved in conference and exhibition committees, he is the delegate for Cyprus to ATypI, the International Typographic Association as well as to IASS-AIS, the International Association for Semiotic Studies. He is also member of the International Association for Visual Semiotics (AISV) and in the executive committee of the Hellenic Semiotic Society (HSS). His research interests are based on Semiotics and Identity in the process of audio/visualizing verbal language using image, text/typography and sound. He is also the founder and director of the Semiotics and Visual Communication Lab in Cyprus University of Technology (www.svclab.com).

Aspasia Papadima
Aspasia Papadima is an Assistant Professor in the Department of Multimedia and Graphic Arts of Cyprus University of Technology in Cyprus. Her research work has been presented in international conferences and published in refereed journals and proceedings. Her graphic and fine art work has been published and exhibited domestically and abroad. Her research interests include the typographic rendering of the Cypriot dialect, visual language and typographic design. She is a member of the Cyprus Semiotics Association (CSA). She is also the founder and research coordinator of the Language and Graphic Communication Research Lab (http://www.cut.ac.cy/mga/research/LGCRllab/).
Diversity in European school populations: A study in Portugal and Greece with particular attention to Romany cultures

Charoula Stathopoulou,
Special Education Department,
University of Thessaly, Greece
hastath@uth.gr

Darlinda Moreira
Departamento de Educação e Ensino a Distância
Universidade Aberta,UIED-UL, Portugal
darmore@uab.pt

Abstract
The growing cultural diversity of school populations poses new challenges to schools and also to schooling equity. Schools (as well as minority and dominant group leaders) should avoid cultural closure and instead should involve recognition of different ways of knowing, in order to share cultural elements and to enable constructive interactions; these practices promote education for peace, respect for diversity and social justice. In this paper, we explore the contributions of Ethnomathematics to the understanding of school diversity in Portugal and Greece, focusing particularly on the Romany culture of these countries. We suggest ways to improve mathematics learning and enhancing the social role of mathematics education in general.

keywords: mathematics education, cultural diversity, Ethnomathematics, Romany education, informal cognition

Introduction
Mostly from the 70s on, a growing awareness of the social and cultural aspects of mathematics education started to be understood as being intrinsically connected to school success. In particular, Ethnomathematics appeared as an alternative theoretical framework for responding to concerns related to mathematical education in multicultural/ intercultural contexts. Domestic practices of numeracy as well as forms of legitimizing school knowledge of diverse populations have been receiving increased attention in the context of Ethnomathematics.

Globally, the results of research reveal that mathematical strategies used to solve everyday problems as well as the domestic practices of numeracy, though not being less valid or less interesting, are not included in the repertoire of school knowledge, and therefore children are unable to use them to succeed in school mathematics (Nobre, 1989a; Baker et al, 2000, Abreu, 2000; Marafon, 1996; Moreira, 2003; Oliveira, 1998).

Using a theoretical approach of Ethnomathematics we compare the results from our researches on both Romany culture and Romany students’ education in Portugal and Greece, exploring their similarities and their differences. Our intention is not only to ascertain what happens in both countries but also to discuss how an ethnomathematical approach contributes to the improvement of students’ mathematical education, and by extension to the empowerment of students’ social role.
1. Theoretical points

Arthur Powell in MES3 (2002) referred to Ethnomathematics as a discipline that emerged from an engaged multicultural perspective on mathematics and mathematics education. Metaphorically using the Adamastor from Luís Vaz de Camões’s epic poem, the ‘Os Lusíadas’ (The Sons of Lusus), Powell speaks about the fact that African people as well as other formerly colonized people in the past, were disempowered by the violent and avaricious European colonial process, something that still happens nowadays in the light of globalization. Because of this, there were certain consequences to their education and of course to their mathematics education. Ethnomathematical knowledge increases students’ self-confidence and contribute to the development of critical insight and force within the process of liberation (Nteta, 1987; Powell, 2002, ). Also, D’ Ambrosio, when referring to the initial ideas of ethnomathematics, speaks about his involvement in research procedures that were carried out in the traditional indigenous cultures of Mali and Latin America (2006).

In general, at the initial development of ethnomathematics the emphasis was put on cultures outside Europe, since to a certain extent, ethnomathematics was determined in counterpoint with western mathematics. The book of Arthur Powell & Marilyn Frankenstein Ethnomathematics: Challenging eurocentrism in mathematics education (1997) is indicative of this perception. It is also indicative of the extent of the research that has been taken place outside Europe, something that can be ascertained by exploring the Ethnomathematics digital library (http://www.ethnomath.org).

That is, although most ethnomathematical research has been conducted by European scholars, it has taken place in cultures outside of Europe. In this way, we might say that Ethnomathematics is itself an example of colonialist practice, as cultures outside of Europe provide raw material for exploitation by European scholars, who use it to further their own careers (Appelbaum, 2008). According to Vital and Skovsmose (1997), an extremely small part of the research conducted in Europe was related to an anthropological strand, since part of the research concerns traditional groups such as indigenous people. In Europe, one might imagine that indigenous groups do not exist. However Europe is not characterized by a uniform culture. There are some groups that do not share the mainstream culture; they are victims of the Eurocentric perception of mathematics/mathematics education as much as formerly colonized peoples outside of Europe. So, issues related to the enforcement power of mathematics education are not limited to the non-European territory.

Among others, Romany is a traditional group of people that still lives on the margins across European countries. Marginalization of this group has obvious consequences in the education/ mathematics education of its students. The same problem also exists for the students of other marginalized groups; this is still an issue the research community is dealing with over the last years.

Such concern is associated with the changing multicultural landscape of school population. Today, the majority of the classrooms are multicultural; in the European educational community there is a growing awareness that non-mainstream students face discrimination, something that is also reflected in the mathematical achievements of these students.

Following the logic from D’ Ambrosio’s words “share the dream of equity and dignity in the relation of every human being ” (2006: p----) we are making an effort through this
work to contribute to the improvement of students’ mathematical education and by extension to the empowerment of their social role.

In the following discussion, our intention is to bring out the decisive role of an ethnomathematical approach, aiming not only to understand what happens but also to contribute to the improvement of both the mathematical education and the social justice for Romany students, as well as for the rest minority students.

2. Romany people in Portugal and Greece: a common origin

One of the oldest Portuguese minorities—the Romany—came to Portugal in the 16th century (Costa, 1996). Historical reports show that Roma have been excluded since then, and even more recent several incidents still continue to highlight how difficult is their inclusion in the Portuguese society.

Also, in Greece, Romany people (Stathopoulou & Kalabasis, 2007) constitute an old traditional group. They perceive themselves as members of the global Romany community despite the differences that still exist. Romany people have appeared in Greece since the 14th century; however there is still evidence that they might have appeared even earlier, perhaps as early as the 11th century.

From the moment Romany people arrived in both countries they have been living in the borderlands of their societies—though, at least at the physical level, there are some groups with stable residence. This fact has been revealed through the way they select places of registration: in those cases they live close to non-Romany districts, their residence is at the end of the mainstream settlements.

In both Portugal and Greece Romany people are self-defined as different from the rest of the society. The way they perceive education/mathematics education is one of the points of differentiation. Formal education is not an activity integrated within the culture of Romany people. Many Romany people dispute the need for formal education. They value the cultural cognition acquired through interaction with other members of their community. They sometimes not only turn away from formal education, but also consider school as antagonistic to the family. Romany students who attend school do not offer so much to their families and their learning at school often conflicts with the values and knowledge of the community. Where parents appraise formal education, their ambitions are often different from the comparable perspective of the Portuguese and Greek society.

Thus, though the school situation is changing and there are persons with a high level of school education, Romany people in general still maintain a low formal education level in general. Children’s presence in schools is irregular; they still make frequent absences for long periods of time. In addition, there is a drop-out phenomenon, more frequent in girls.

Thus, the situation in the schools of Romany children, both in Greece and in Portugal, constitutes a major concern for educators and administrators, either because of school failure or because the measures taken in order for the schools to acknowledge this minority have failed.

Apart from their attitude to the formal education two more cultural characteristics—the semi-nomadic way of life and the socio-economic organization—further complicate their formal education/mathematics education. The Romany semi-nomadic way of life has obvious consequences for formal schooling: for example, it often results in a delayed start to schooling, and creates inconsistent attendance. The socio-economic organization, in
Diversity in European school populations: A study in Portugal and Greece with particular attention to Romany cultures

turn, unfolds in such a way that businesses are usually organized within the framework of the family group. As a result, children are involved in their families’ activities. Through these they are taught in a horizontal way. This teaching is in their first language, which is different from the Portuguese or Greek language used at schools, it takes place in contexts that make sense for the children. They are mostly interested in the cognition that is necessary for community survival (Moreira & Pires, 2012; Pires & Moreira, 2005; Stathopoulou, 2005).

In addition, schools have limited knowledge about Romany culture, namely: schedules and holidays are not adequate to the Roma way of life; there is no integration of children’s informal knowledge in school activities; and the Romany culture is not represented in school materials.

In this scenario, in Portugal as well as in Greece, mathematics education presents some singularities; it is necessary to discuss them in relationship with the schooling process of Roma children in order to find out ways to avoid both school failure and drop-out consequences. In this paper we’ll try to further explore differences and similarities regarding the way schools in both countries face Romany students and how far the culturally acquired cognition of Romany students has been developed in the formal education context.

3. Romany students in the Greek school context and informal cognition

What is presented here is based on an ethnographical research (Stathopoulou, 2005). The main part of the fieldwork was a first grade class of exclusively Romany children. During a school year (2000-2001) we conducted observations; we posed activities in addition to interviewing the students.

Through the observation it was made obvious that a classroom and the school in general, is a place that produces cultural conflicts for Romany students. The formalized arrangement in the classroom and in general the rigorous rules in the classroom are very different in comparison to their community where they feel a sense of freedom. The following instance is indicative of the cultural diversity Romany students experience in this context. There were two Romany boys, about ten years old, on their bicycles just outside the schoolyard. After a short discussion, I asked them 'why they did not come to school'. The two boys pointed to the enclosure with evident ridicule/dismissal/hatred, saying: "Don’t you see how they are!!". For them, school was an expression of a lack of freedom, an obvious cultural conflict. The fence was a physical symbol of the broader experience of entering school.

The fieldwork was not confined to the school context. We were interested in observing students’ families, and particularly their experiences in the context of their family businesses, in order to examine the context in which students were developing informal mathematical knowledge. The parents of all Romany students deal with commerce. The majority of them are street greengrocers or sell household items on the street. One family apart from street commerce ran a small shop where even the young children were observed in money dealings. During the observation we were impressed by the fact that children as young as three years old were dealing successfully with money. Although they

1 The title: "The Connection between Cultural Context and Teaching/Learning of Mathematics: An Ethnographic Study of a Class of Romany Students and of their Community of Origin".
didn’t always know the value of coins they managed to carry out their purchases using several strategies.

Some activities that we conducted in the context of classroom show their abilities in mental calculations. The first two activities were given to 6-7 year old students during the first period of the research in October. They had a diagnostic form in order to explore the informal knowledge children had culturally acquired before coming to the school (Stathopoulou & Kalabasis, 2002).

a. You have 5 hundred drachmas and you want to buy two cheese pies. If each cheese pie costs 2 hundred drachmas, would the money be enough?

b. Your father has given to your brother 1 thousand drachmas and to you five hundred drachmas, four hundred drachmas and two fifty drachmas coins. Has either of you got more money than the other? If so which of you?

Twelve out of twenty-five students were selected as a sample representative in relation to age, gender and aptitude. The test was applied separately to each student at different moments of time and the students did not collaborate. With the exception of one girl who possibly got confused with the actual price of the cheese pie, all the rest answered both questions correctly, although in some cases they could not justify their answers. In response to the first question, the majority of them answered spontaneously. Almost all the answers were of this kind:

“Yes, I get one hundred drachmas change”

“Yes, and I keep one hundred drachmas”

Some of the answers to the second question were:

“The same we get together, the same we get together”

“Mine, becomes one thousand”

“one thousand are all of these”

“nine hundred and two fifty drachmas coin, 1000, the same”

“They will become the same, he gets as much as I get. We know them Miss”

The same activities were tested in a non-Romany first-grade class, at the same school. Two students—one boy and one girl—with the best aptitude and two students—one boy, one girl—of low aptitude, according to their teacher’s estimation, were selected.

All of their answers are quoted in order to show the differences of these two groups.

- “No, I need 1 thousand”, (to buy two cheese pies).
  “My sister” (has got more money)

- “Yes, the money is enough. I don’t know how much change”
  “I get more than 1 thousand. I don’t know how much”

- “It is enough, I get 4 hundred change”
  “Fanis”, he means his brother gets more money.

- “No, the money is not enough”
  “To me”

The different ways that these two groups of students respond to the above activities is characteristic of their informal knowledge, the knowledge they culturally acquire through everyday experience. As noted above, Romany students are involved in their family’s activities since their socio-economic organization is based on the family. Through this involvement they become adept at mental calculation. Also, the fact of their language’s

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2 Non Romany community in this district is of the same socio-economical situation but culturally differentiated from the Romany community.
orality\(^3\) contributes to the development of their ability with mental calculation. During the observations I never saw any children or adults using paper and pencil to calculate anything. Very young children—3 to 6 years old—when they went for shopping at the small shop at which I conducted an observation -- memorized long lists of things, since they and their parents did not write down them. Furthermore, their ability of doing mental calculation is strongly connected with their identity: “they will become the same, he gets as much as I get. We know them Miss”.

Romany students are considered of low aptitude in school. It is difficult for them to respond to the formal teaching of mathematics. The responsibility for this failure is imputed to the way the formal mathematics education is designed: an education for the mainstream students; an education that does not take into consideration cultural diversity.

In the following activity students were asked to provide an answer to a typical problem of subtraction, after having been taught the typical algorithm of addition and subtraction:

\[
24 - 18 = \, ?
\]

This was also written in this way:

\[
\begin{align*}
24 \\
-18
\end{align*}
\]

to help them use the typical algorithm of subtraction.

All of them solved the problem without writing anything down, except for the result: 6.

When they were being asked about their way of working they provided the following answers:

- **Ch:** we have 24, we take off 4 we have now 20. We take off the10 and we have 10, we take off 4 more and 6 remain

  Typical representation: \([24 - 4] - 10 = 6\)

- **S:** we put 2 more to 18 and they become 20, and then I have other 4 and they become 24.

  Typical representation: \(18 + 6 = 18 + 2 + 4 = (18 + 2) + 4 = 24\)

- **G:** look, we have 18 and 24. I take off 10 from 18 and also ten from 24. The rest of 18 are 8. From 8 to ten is 2, and 4 (he means from 14) they become 6.

  Typical representation: \(24 - 18 = (24 - 10) - (18 - 10) = 14 - 8 = (10 + 4) - (10 - 2) = 4 + 2 = 6.\)

The way Romany students negotiated the above activity shows us that for them it is easy to use mental calculations to solve problems not only in the real life context but also in the classroom. The fact that they acquire mathematical cognition in context that produces meaning appears to make them able to transfer this cognition in other context as well, using common sense. Apart of knowledge transition in this instance the role of language orality is ascertained. In all of these procedures students did not write anything. They conducted all the calculations mentally and just for research purposes they were expressed formally by the researcher.

In the above instances students were effective in mathematical tasks since teaching was not rigorously formal. When they are called to face these kinds of tasks in a formal/written way they cannot demonstrate the same level of skill and understanding. All the teachers of the school considered Romany students incapable of meeting school

\(^3\) Romany language is a non written one.
expectations. They did not acknowledge the fact that formal teaching generates conflicts since in their everyday experience they are taught in different way—in an horizontal way.

The criterion for a good solution outside of school is merely to be a working one, not a formally proper one.

We could say briefly that Romany children are very familiar with calculations—especially when dealing with money. Their language is an obstacle in one hand for their learning of mathematics in a school context and its orality a qualification in doing mental calculations. Their language orality is connected with their proficiency with mental calculations. The fact students don’t respond effectively in school context is a result of the designed mathematics curriculum. The state, as represented by school practices, considers education and Romany people as incompatible things.


The most prominent feature of the home-based educative process of Romany children is that children’s education is a result of a collective action of the social group - it is in the heart of the community, which comprises three and four generations, that the socialization process unfolds in a coherent, cohesive, continuous and safe way. As Liegeois (2001, p.69) highlights in a Romany family “Children and adults work joined, live joined, suffer joined. The child learns through the immersion in the family, respecting the adult and being respected by him”.

Learning is done especially by observation and reproduction of what they hear and see, while taking an active role and participating in the practices of their communities. Within familiar and effective contexts and throughout oral transmission, knowledge, practices and techniques are observed, experienced and imitated by children, who in this way learn and reproduce the knowledge of their social group. Actually, the education and socialization of Romany children are not only mostly developed inside their communities but significantly children go along with their parents to work, especially to markets and fairs (S. Roman, 1980; Fraser, 1992/1995; Okely, 1983/1993; Ferreira, 2003; Piers, 2005; Candeias, 2006; Moreira e Pires, 2012).

From the Roma’s viewpoint schools do not understand their children, and their need for freedom, which is impossible to experience inside the space of a classroom. Therefore school is generally regarded by them in a minimalist perspective, the major interest in schooling being to provide children with some basic expertise in reading, counting and writing (Aires, 2004).

Used to an oral apprenticeship, transmitted informally, children feel and they are treated as estranged in a school system fundamentally based on the explicit transmission of the knowledge. Thus, frequently, schooling is felt as an anguished process in which children are compelled to be subjected to rigid rules, to change habits of life and models of behavior. As Cortesão argues “frequently school is the first place where the Romany children feel that they are different and internalize the negative stereotype of ‘being a Roma” (2002: 368). Simultaneously, demonstrations of lack of interest in school are expressed by these children as a consequence of the disconnection from their everyday lives.

Although Romany communities undergo moments of change where school education emerges as having a role to perform, and both socio-political measures and efforts by
school communities gradually are open to multicultural education and to a implementation of a “politics of the difference”, we continue to think as Liégeois who avers that « Up to now, for the Gypsies, the school failure is a fault of the school, which could not welcome them, not even keep them, nor to provide them ways of adaptation to the modern world » (2001: 199).

In this frame, it is necessary to develop new ways to promote the school success of Romany children while making the process culturally significant.

Grounded in Ethnomathematics’ theoretical framework several research studies were carried out in Portugal focused in the mathematical education of the Roma children (Ferreira, 2003; Moreira & Pires, 2012; Pires, 2005, Candeias, 2006). The results highlight those Romany Portuguese children’s contacts with commercial activities, namely, when accompanying their parents to the markets and taking active part in the sale of products, provided them an immersion in contexts of mathematical activity that helps them to develop an appreciable self-confidence in the performance of oral mathematics calculations.

The following dialogues were collected during fieldwork in an elementary school (Pires, 2005). They were recorded on the school playground and clarify how mathematical activities that are imprinted and performed in Romany daily practices are appropriated by children who use the same cultural strategies to solve mathematical tasks at school. These strategies do not include writing and are at the basis of how children used oral mental calculations (Knijinik, Wanderer & Oliveira, 2005)

**Dialogue 1:**
R: Do you use to go to the fairs with your parents?
C1: Yes, I do.
R: When you go to the fairs what do you do there?
C1: I help my mother ... To sell
R: What do you sell?
C1: Now we are selling fabrics, sweaters...Towels.
R: How do you help?
C1: I help to pay attention to the ladies, to give the materials to my mother and to receive money.
R: ...is it you who make the calculations or is it your mother?
C1: I make the calculations and then I give the money to my mother.

**Dialogue 2**
R: Do you use to go to the markets with you parents?
C2: No.
R: So...
C2: I use to go with my mother, like... sometimes I sell near the houses with my mother.
R: So it is not in the markets that you sell. It is in the streets.
C2: ...
R: And when you are with your mother what do you do?
C2: I stay with my mother, sometimes I help her to sell, sometimes I just stay speaking with the ladies that I already know.
R: And... when you are helping what do you do?
C2: Sometimes my mother say to take care of things sometimes she says to peak up
things ....like that
R: And to sell? Do you sell?
C2: Yes. Sometimes I sell glasses, sometimes clothes...
R: And don’t you have trouble with money?
C2: No

To understand how children did the selling calculations, a hypothetical situation of purchase was put to the child. The following dialogue (Pires, 2005: 118-119) once more demonstrates the child’s skills with oral calculation:
R: -How much do you sell the glasses?
C2: - There are some at 15 euros, others 10?
R: - If I asked you how much are 5 glasses...
C2: - How much each?
R: - 15 euros.
C2: - 15? I shell multiply 5 to 15 isn't it?
R: - Yes...
C2: - 15 and 15 make 30, 30 e 30 ...60
R: - 15 plus 15 ... 30 and 30
C2: - 60...70...75.
R: - 75, very well, well done!

With these examples we intend to describe how mathematical activities are integrated and practiced in the domestic educative process and connected with the economic activity of the group. The above mathematical situation suggest that children posses alternative strategies for mathematical calculation, and reveal competencies for solving mathematical problems using their own methods. Thus, children use their cultural knowledge to solve mathematical problems in school. However, research also shows that the strategies used by these children are not recognized as acceptable in typical classes.

5. A discussion: Exploring similarities, differences

In these studies conducted in Greece and Portugal the similarities in the cultural process of mathematics education and the way schools in both countries face Romany students are profound. First of all, in both countries students face cultural conflicts in the school place as well as in the classroom that are connected to cognitive conflicts and affect their way of learning; school learning is very different from the learning in their community context.

Through the above examples, it is clear that Romany children’s involvement in commercial activities immerses them in contexts of mathematical activity, resulting in knowledge and ability in doing mental calculations. The skill with mental calculations is promoted inside the family and is worked out in specific contexts related to the community economic organization. However, how well is the culturally acquired mathematical knowledge and cognition of Romany students further developed in the formol education context? In fact, these examples also demonstrate that although children use their mathematical informal knowledge, schools neither legitimize it nor promote the mental calculation of Roma children. The disconnection between the school mathematical curriculum and the students’ daily
lives has been largely discussed inside the community of Mathematics Education. As D’Ambrosio (D’Ambrosio 1985, Gilmer 1988) notes, the mathematical competencies learned at home and that are lost in the first year of schooling are essential for everyday life and labor. “The former spontaneous abilities have been downgraded, repressed, and forgotten, while the learned ones have not been assimilated. Thus, early education instills a sense of failure and dependency”. In case of cultural groups different from the mainstream, the non-integration of everyday cognition aggravates the consequences for minority students.

A consensus about the necessity of school mathematics contextualization demands that students actively participate in it, and that teachers, in a dialogical process, “involve students in a permanent problematization about their existential situations” (Freire, 1985, p. 56), in order to conduct the application of mathematics in the contexts of students’ experiences and thinking.

In conclusion: it is necessary to leverage students’ everyday social and cultural knowledge in order to improve domain-related understanding (François & Stathopoulou, 2012). The rich sources of knowledge that exist outside the classroom in the varied activities of cultural life could improve students’ participation in classroom activity. A rich learning context that is taking the background knowledge of the learners into account, is taking issues of race, academic identities, and access seriously and give students the opportunities to gain increased authority to participate in mathematics in ways that validate their everyday practices and their identities, too.

References


Charoula Stathopoulou
Charoula Stathopoulou is an Assistant Professor in Special Education Department, University of Thessaly (www.uth.gr). She teaches Mathematics and Didactics of Mathematics. Her research interest and publications refer to sociocultural dimensions of mathematics education and Ethnomathematics.

Darlinda Moreira
Darlinda Moreira is Professor in the Department of Distance Education at the Universidade Aberta, Portugal. Her’s main subjects of interest are in the field of Multicultural Education, Teachers Education, Life Long Learning and Culture and Distance Education. She has been author of many articles and book chapters.
Investigating young people’s online discussions from a linguistic and sociological perspective

Anastasia Kappatou, M.Sc. Ph.D
University of Western Macedonia, Department of Early Childhood Education
natassakf@hotmail.com

Abstract
This article aims at demonstrating the research methodology and results coming from the linguistic study of online discourse and the sociological analysis based on the perceptions of users for the online communication channel (chatting). Specifically the stages of the research study are described as long as the research tools utilized within the linguistic processing of the sample but also within the sociological analysis of the attitudes of subjects. Alongside representative results obtained from both research approaches are exhibited and discussed. As far as the linguistic approach is concerned it is worth noting that the lines of online discussions gathered from public and private press talks were 4560 in number and their study was based on classification in the categories of linguistic analysis (morphology, syntax, spelling, pragmatics, semantics, lexical origin). On the other hand, in the context of sociological research the participants were in the age class of 13-25 years old and were asked to complete a questionnaire in order to collect information of social survey and reflection of their wider attitude towards online chat. The results obtained from processing the responses of the respondents were crossed with their responses to questions addressed to them in conducting individual semi-structured interview type.

Keywords: chat, communication, internet language

Introduction
The contribution of the particular research to the linguistic and sociological studies of digital media is significant. This is due, on one hand, to the lack of similar research approaches in the Greek scientific literature. Despite the fact that during the past few years several surveys have been conducted regarding internet communication whereas none of them handles the combination of research tools (linguistic and sociological) that offers an overall perception of the internet discussion. In particular, the sample of internet conversations is linguistically examined focusing to the special features of the language used by the internet communicators. Besides the user’s attitude towards the new communication media is examined through answering a questionnaire in written form and in oral by taking part in an interview conducted by the researcher.

1. Methodology

1.1. Linguistic research
The goal of the linguistic research comprises on one hand to the emergence of specific morphological, syntactic, lexical, factual, spelling and semantics consistent with the online language code and differentiate it from the common language tool and on the other, in comparing and contrasting the characteristics of speech utilized in online discussions of young users depending on the social networking page or discussion platform they choose.
1.1.1. Research course

Firstly the sample collection of online discussions took place. This procedure was made in two ways depending on the type of conversation. In specific, public online conversations, meaning those that take place in the electronic platform of IRC were retrieved from the internet. Preceded the manufacture and distribution to users of an online questionnaire in which they were asked to fill in their age and the communication channel they use the most so as to discriminate the most popular communication channels. The private conversations that took place on social networking website of Facebook and the implementation of online chat MSN, due to the confidentiality of personal conversation were gathered by using the method of personal approach to users who were in the age of new grade and came from the researcher’s social surroundings. Specifically, they were asked to talk about any topic they wish and then with partners of their choice, to record their conversations and deliver them to the researcher.

Following the sample collection was the study per line of internet dialogue according to the following categories:

A. Writing
   1. Syntax
   2. Extralinguistic elements (intonation emphasis)
   3. Extralinguistic elements (intonation abeyance)
   4. Graphology
   5. Spelling

B. Morphology

C. Pragmatics

D. Lexical source
   1. Insulting vocabulary

E. Semantics
   1. Sentence Semantics
   2. Lexical Semantics

The final stage of the linguistic analysis consisted of the conduction of frequencies using the program of SPSS.

1.2. Sociological analysis

The sociological analysis aims both at highlighting the most popular conversation topics of users in an online discussion and also at creating an establishment of the sociological profile, which consists of information regarding their social characteristics and mapping of their general attitude towards the online communication tool.

1.2.1. Research course

The research study followed the steps below:

1. The emergence of topics in the online discussion held by categorizing the issues that users grapple with using the method of content analysis.

2. The sociological profile of users was established by both the answers given by the users to a questionnaire distributed (sample 250) to them and also in individual semi-structured interviews that participated which were held by the researcher.
1.3. Demographics

In relation to the demographic characteristics of 250 subjects that constituted the sample of this research we deposit that they showed equal distribution to the factor of gender (boys 50%, girls 50%) while regarding their ages they were divided into three groups. Specifically, the first age group consists of users aged 13-15 years old and covers the 53.2% of the total sample, the second group consists of young people aged 16-20 years old and represents 35.6% of the total sample and the third age group includes subjects aged 21-25 years old accounting for 11.2% of the sample.

Regarding their socioeconomic status, in majority, the occupation of the father belongs to the category of public employees with percentage of 30.6% and free-professional craftsman with percentage 20.0%. The mother’s profession is primarily a public servant with a percentage of 31.8% and household with percentage of 26.0%.

The educational level of parents and specifically from the father’s side corresponds mainly to the levels of graduate of Secondary education at a percentage of 39.0% and graduate of higher education at a percentage of 24.8%. The mother is primarily graduate of secondary (34.2% share) and higher education (30.9%).

Finally, regarding the residence of young people that took part in this survey it is indicated that 54.4% of them come from the two major urban centers (Athens and Thessaloniki) and other from urban centers by 45.6%.

2. Results

2.1 Linguistic research results

The linguistic study of the sample of internet dialogue lines (4560) showed the following results.

a. From the syntax opinion it was observed that the dominant shape perception of the hybrid version of an internet conversation is the one that includes strong elements of orality. This means that in the syntactic structure of each message were inserted orality indicators, such as «Oxi an psifistei katalipsi tha traviksei mexri ta xristougenna re su .den xanetai to eksamino dld.». The relationship of online discourse with the spoken word and especially with regard to retirement was highlighted by G. Androutsopoulos (Androutsopoulos 2012) arguing that “the particular circumstances of literacy on the Internet have effects on the texture of language. An important part is summarized by the term of "oral capture". "The oral conception begins with the whole layout of the text. Particularly in circumstances of dense communication the text size is dramatically reduced. The whole message may well consist of only one sentence." Besides, Crystal notes that "often presented in the online floor speech language forms, such as short syntactic structures, repetition of phrases and the more relaxed propositional structure" (Crystal 2006).

b. During chatting users lack the possibility of personal contact with their partner, and thus they are inserted between the computer screen. This hampers the observation of non-verbal behavior of their partner as well as their emotional state. For this reason, they use marks from the written word to emphasise their writings and thus to convey their feelings to their partner (intonation emphasis).
a. The most basic form of expression of intonation emphasis in the sample of online dialogues collected was the repetition of punctuation. This finding is consistent with literature data related to this aspect. In particular, Basiliki Markou mentions in her doctoral thesis amongst other features of speech in Modern Written Communication 'innovative use of punctuation for emphasis. It was observed heavy use of punctuation to indicate emotions. (Markou 2010). " Besides G. Androutsopoulos notes that " in the Internet you can not see nor hear the querent. So the users invent new ways of communicating to indicate smiling or crying, to show that they are surprised, angry or excited. Taking inspiration from the comics, repeating punctuation helps in demonstrating these feelings (Androutsopoulos 2012).

b. Regarding the results of the study referring to graphology features the lead of the use of the Greek font was demonstrated. According to the responses of the subjects to similar question put to them in the interview it seems to be a trend by some young peoples the abandoning of greeklish and the return to the use of Greek. The reason for this is that some young people consider the use of greeklish harmful to their performance in language courses at school. Within research that took place in secondary school students in order to study the phenomenon of greeklish and explore their attitude on "whether the students consider that the use of greeklish is a threat to the Greek language, 58.5% of the students placed positively but with some caution, since the 32.3% of them recorded the option "probably yes."(It should also be noted that around 2004 appeared in many Greek online forum (where greeklish was the main communication language code) a movement against the use of greeklish. Administrators threatened with ostracism users who continue to use greeklish, making in this way mandatory the use of Greek, but nevertheless the use of greeklish did not became reason for exclusion from the forum. Such examples were Translatum Greek Translation Forum, the AthensWireless Metropolitan Network Forum, the Venus Project Forum, the adslgr.com Forum and Greek Technological Forum.

c. In the category of morphology was found that users make extensive use of abbreviations. Abbreviations emerged as a need for users to meet the requirements of the operating system communication platforms that posed as a maximum limit of 160 characters per message. Most of these abbreviations have been used long before the advent of mobile phones in our lives. However as mentioned by Crystal «when limitations arising from the operating program were overcome, the use of abbreviations was expanded to impart a playful character to online discussion and enhance the fascination of one user to another" (Crystal 2006). The most common abbreviations in the sample we collected were: dn (den), k (kai), pc (personal computer), gt (giati), fb (facebook), tn (thn).

d. The study of the factual characteristics in online speech highlighted the lead of subcategory of speech acts in comparison with the others. In particular the subcategory of "expressive speech act" consentred the higher percentages. The desire of users of online communication to convey aspects of their emotional state to their interlocutors expressed through the use of expressive speech act. According to Marketa Johnova «the main motivation for the use of speech acts is for users to introduce movement and life in an online discussion. Speech acts help
personification of respondents. Sometimes the discussion in a communication channel resembles a movie script (Johnova 2004). In particular, the use of expressive speech acts is particularly popular as the online discussion is related to expression of feelings and personal views. However, the researcher faces with distrust to the public expression of feelings that is taking place in chat rooms. Specifically she comments that "emotions in chat have more to do with the description of what the user says that he feels and not what he actually feels. As soon as every feeling is described it becomes an object of thought and not an emotion. In online communication is easy for users to hide their true feelings. Users often guess the psychological status of respondents from the way they write" (Johnova 2004).

e. The study of the lexical origin of online discourse revealed that the main source of linguistic influence is the everyday vocabulary, particularly the slang language. This feature of online communication code language has been also identified by other researchers. Examples include the observation of G. Androutsopoulos that "the vocabulary of electronic communication incorporates expressions of everyday language and elements of the code of each gang." (Androutsopoulos 1999).

f. As far as the appearance of the class of semantics is concerned and especially the sentencial semantics, it was highlighted the primacy of orality subset of data. As mentioned in the syntax category where the dominion of orality as syntactic form was identified, the existence of semantic phrasal units coming from verbal speech is an expected phenomenon in an online chat. In users quest to create an atmosphere of intimacy between them, as the online discussion is by definition a cold and impersonal communication pathway, they tend to integrate in their discourse elements from the spoken word. Similarly, in the lexical semantics subcategory the highest incidence was the one that includes figures of speech, the use of which comes from the verbal speech and serves the users need to attract attention to their messages and be more descriptive.

g. In relation to the incidence of abusive vocabulary it seems to have little appearance to the whole sample including mild acidity expressions which usually have other recipient apart from the interlocutor. In contrast to the previous years where there was a widespread perception that young people were entering the channels of communication to express themselves freely and without censorship using insulting vocabulary, it seems that the situation has changed. Young people are opting for other reasons the online communication and not to use insulting expressions. Besides, we should not overlook the fact that "scurrilous friendly addresses (eh asshole) and some offensive stereotypical phrases (damn) are typical of youth culture" and as such they should be treated.

h. Considering then the spelling of greeklish we observe that it follows, in the majority of cases, the pattern of visual transcription, thus this does not mean that there are not also other types of transcription (sound, positional). Interesting alternative ways of writing the same word were noted depending on the transcription system that each participant selects.

i. As far as the comparison of the dialogues that take place in different media is concerned we can support, summarizing the results, that discussions composed
on IRC include more elements of orality and expressive verbal acts, in morphological aspect there is an abound of acronyms and in lexical view the words used are influenced by the slang language. This relates to the fact that the participants in the dialogue via IRC have not advance any connection between them, thus they seek through the use of those elements above the preference of their interlocutors (acronyms), to pique their attention (expressive speech acts) and foster an atmosphere of intimacy between them (borrowing language from slang orality).

2.2. Social results

Young people prefer online chat site by social networking sites with a rate amounting to 90.3%, while they prefer this medium rather than using the electronic platform of discussions on IRC in an percentage of 93.6%. The favorite social networking website among young people are Facebook (62.5%) and MSN (22.3%). Besides, we should not overlook that the statistics showed that "in 2010, Greece was the 26th country to use Facebook, according to the official data of Facebook. Within two years, Facebook users in Greece increased by 462% (in 2008 it was 505,000, in 2009 was 1,639,000 and in 2010 came to 2,838,700)" (www.enet.gr).

The main reason that young people use chat rooms are: for communication at a rate of 51.8% and the use of multimedia (rate 25.0%). Similarly, Bratitsis Th., Kyridis A., & A. Karaspyrou, say "mostly (young people) prefer to interact with subordinates, but also to create new friends. This suggests that more young people prefer the virtual environment in order to "build" bridges of communication easier with their peers, rather than personal, direct contact. "(Bratitsis et al. 2010).

Regarding the significance of communication in relation to the variable of gender and space used by youths to make chat, it appears to be a correlation between gender and communication with girls to show precedence (small) compared with boys in this field. Also it was found that when chatting takes place from the home computer the main reason is to communicate with others.

The average frequency use of online communication is 4 hours (35.2%). Correlations with social characteristics, such as father education level showed that the most the educational level of the father is increasing the greater time is spend to online communication. Similar research (katerelos et al. 2010) records as average time use of chatting by pupils / students and high school students the 3 hours, while another study reported as average time spent in order to make new acquaintances through internet the 3.71 hours, while users participation in discussion rooms grades more than 2.50 hours (Tsouvelas & Giwtakos 2011).

The language tool most commonly used by young people in their online discussions is greeklish at a rate of 69.4%, Greek by 14.0%, English at a percentage of 5.1% and all of the above at a percentage of 17.0%. These data are supported by similar research conducted in 2004-2006 by the Centre for the Greek Language. According to research findings adolescents when entering chat rooms they choose, in their majority (43.3%) the use of Greek with Latin characters (greeklish) (koutsogiannis 2007). Their preference in the specific language code is attributed to the maximum speed offered in their internet involvement. Besides, young people prefer the use of greeklish compared with other language tools for usability reasons at a rate of 47.4% and interest in the language (17.7%
share). When subjects were asked to clarify what is meant by the term usability respondents indicated maximum speed by 73.3%. In order to study further the use of greeklish it is associated with several parameters. Originally it is associated with the place where the online communication takes place, which showed that greeklish appear more often among young people who use social networking sites to chat. Then, there was a correlation with the frequency of time of online discussion and use of greeklish where it became evident that an increase in the time spent by young people for chat-over 4 hours-is an equivalent of abandonment of greeklish as basic linguistic tool. Also, the use of greeklish is correlated with the number of computers available to the users to determine that increasing the number of P/C make a similar increase in the use of greeklish. Finally, the use of greeklish was examined in light of the constraints imposed by their parents in the use of P/C in general and use of social networking sites in particular. This correlation showed that in cases where there is no or little parental exercise in the use of H/Y the use of greeklish displayed an increase and as the constraints imposed by their parents to children rise the use of greeklish is reduced.

Young people have by average 1 P/C (in percentage 37.9%) and personal computer at a rate of 72.7%. This fact was associated with socio-economic characteristics such as parental education and father occupation, interdependency was indicated. In particular, there is a proportional relationship between the number of H/C and parental education whereby when the educational background of parents is increasing respectively a quantitative increase is marked in the number of the household PC. In a corresponding manner acts the influence of the father profession.

Users were asked to undertake a self-assessment of their knowledge about the PC. They mostly valued their cognitive level as good (55.4%). Exploring this issue in relation to the number of PC that users possess it has emerged a proportional relationship between the two data. Increase of the number of PC in each household means better knowledge level on PC for users (according to self-assessment of the users themselves).

The subjects of this study seem to keep a good relationship with new technologies which is generally showed by the number of new technology devices that use other than the computer. The most popular device used by young people is the mobile phone at a percentage of 26.8%. Starting from the Greek data, the results of a qualitative research conducted by the company Mind search on behalf of mobile operator Wind in December of 2011 on a sample of 2176 children aged over 13 years, are indicative (Mind search 2011). In particular according to them:

1. The computer and the mobile phone is now a member of the family and the gang: number one in frequency communication media with friends is the mobile phone, second is msn, third is the e-mail and fourth is sms.
2. Children play complex games on mobile phone of their parents before they even learn the multiplication tables.

The contact of young people with new technologies was also approached in relation to the variable of residence and it was found that users who reside in one of the two major urban centers (Athens, Thessaloniki) have greater familiarity with technology compared to users who reside to other urban centers.

Regarding the place used primarily by the research subjects for their Internet communications is home (93.3% share) and the Internet cafe (rate 13.0%). Next issue of concern to users was that referring to the knowledge level of their parents.
over the PC use. The subjects, most of them deem their parents familiarization with the P/C as moderate (28.0%) and low (27.6%). This issue has been studied in relation to the variables of place of residence, profession and maternal educational attainment of both parents. Firstly interrelationships revealed between the degree of parents familiarity with the P/C (according to the judgment of their children) and place of residence. Specifically, parents who live in the two major urban centers (Athens-Thessaloniki) are more familiar with the P/C compared with residents of other urban centers. Then, the correlation between the good use of the P/C with the educational level of the parents showed that in both cases (maternal education, father education) there is a proportional relationship: as education increases so does the degree of familiarity with the P/C. Corresponding results showed the association with mother’s profession as well.

In relation to the space their parents use more the P/C the subjects of the research testified that it is the house (with a rate of 76.1%).

Regarding the issue of parental control over the use of P/C research subjects testified that do not accept any limitation on percentage (44%) and that sometimes this can happen at a rate of 32.7%.

3. Discussion of results underlying users attitude

This section will summarize the results of the processing of responses given by users in questions related to the classification of motives when conducting online discussions. All the above parameters contribute to the formation of the general attitude of users towards online communication.

The reasons, according to the users responses to similar questions that motivate the online communication in order of preference are as follows:

1. "The online communication is useful when you are away from your friends" (75.8%).
2. "I share with my friends audiovisual material (video song)" (70.7% share).
3. "All my friends communicate via internet" (61.4% share).
4. "I spend my time doing chat" (55.8%).
5. "I am informed about issues that interest me from my friends (fashion, sports, gossip, new diets, sex etc)" (52.5% share).
6. "I choose internet communication because it is cheaper" (48.0%). This statement is further investigated in relation to the age of the users and mothers occupation. Specifically, the correlation showed that users at the ages of 16-25 years are interested in cheaper communication, while ages 13-15 are indifferent. As for the occupation of the mother it was recorded a higher frequency of underlying agreement with the content of this statement when the mother is working in a job belonging to middle socioeconomic professions.
7. "The online communication is fashionable" (47.1%).

Regarding the views expressed by the research subjects in the online discussion we distinguish two directions.

Skepticism towards the media. The subjects expressed suspicion about the authenticity of relationships created online, as the manipulation of the identity of the interlocutors (rate 63.2%) is a common phenomenon. The content of this declaration has been studied in relation to gender and it was revealed that girls are more shy towards the medium for the
reason mentioned earlier. Also, subjects expressed their concerns regarding the lack of personal contact with the interlocutor (rate 59.5%) and the majority responded negatively to the possibility of meeting in real life with an online acquaintance (54.6% share). Regarding this issue, the correlation with the variable of sex showed girls to be more negative toward this possibility in comparison with boys. Moreover, the users mostly regard as superficial the acquaintances created through the online channel of communication with the girls to appear more proponents of this view compared with boys. The majority of users expressed their views on the harmful effects of online communication in cases of prolonged use (66.8%) and utilization of children who are vulnerable to deception on the Internet (75.5% share).

With the data obtained from this group of statements of the attitude scale are corresponding the results of the research conducted by Papanis (2008), according to which "Facebook is accused by users themselves that promotes superficial relationships and that they can not find support through this." In a parallel research conducted by Bratitsis & Karaspyrou & Kyridis it is said that "the majority of respondents (60%) believes that ultimately it is not safe being in social networking websites. That uncertainty is reflected to some extent also in the explicit declaration of the 45% of respondents that they are opposed to creating a relationship with a person of the opposite sex who would know via Facebook" (Bratitsis et al. 2011).

Positive attitude towards the media. Young people who were the sample survey indicated the advantages of the online communication, in accordance with their own judgment. In particular, they highlighted the fact that through chat they have the opportunity to talk briefly about a variety of topics and direct interest to them with their friends. This dimension was approached in correlation with domicile and proved that young people of the two major urban centers (Athens, Thessaloniki) attach greater weight to the contents of the above declaration. Young people also reported that they evaluate positively the role of online communication in relation to the demands of the modern era (rate 62.3%). Finally, users assessed positively the multifunctional environment of social networking websites (65.0% share).

Communication problems. This section contains statements related to structural features of online communication. Specifically, the subjects reported that they like to chat or have the opportunity to talk with their friends (70.4% share). This dimension was approached in relation to the variables of gender and age and showed that girls more than boys and the age of puberty (13-15 years) more than other age groups tend to seek online contact with friends. These data are confirmed by the findings of research conducted by Efstratios Papanis, according to which "the boys are more favorably disposed towards social networking compared to girls" (Papanis, 2008).

Also, online communication, according to its users is an economical way of communication. This attitude of users was studied in relation to place of residence and age and it seemed that the residents of the two major urban centers (Athens, Thessaloniki) and ages 16-20 years old show concern for the fact that chatting is equivalent to economical way of communication.

Another feature of electronic communication which arouses the interest of the users because they say that they consider it as "their own language" which allows them quick communication and without thinking about the spelling of words is the use of greekllish (54.0% share). The use of abbreviations (rate 44.2%) and emoticon (62.3%) are the most
attractive features of this linguistic tool in the view of users and are utilized primarily by girls and adolescents (13-15 years), who stated that they utilize them more than all other age groups at the aggregate level.

Additionally, subjects consider high the merits of the electronic communication of the multimedia environment that enables them to engage in many activities simultaneously (computer games, chat, video etc) (70.5% share).

Furthermore, young people positively evaluate the potential offered by chatting to talk with friends who are in distant geographical distance from themselves (79.2% share), a fact which attach greater importance among ages 13-15 and to reestablish contact with people who for various reasons had lost contact (77.2% share), a very important element especially for individuals residing in two large cities (Athens, Thessaloniki) and ages 16-20. Furthermore, the direct accessibility of internet contact that is opposed to the limitations of parents for spending time on personal contacts (56.9% rate) is important for users who reside particularly in urban centers than for those living either in Athens either in Thessaloniki.

Finally, subjects answer that they primarily enter the online chat room using their real identity. Mostly girls showed their agreement with the statement above, however some differences were identified when examined the contents of this declaration with the education of the father. Specifically it appears to be a dependency relationship between professions belonging to low socio-economic backgrounds and the tendency of users in this case to falsify their identity.

Entertainment. In the context of the statements contained in this section users have submitted their views on the characteristics of online communication that are entertaining for them. Specifically, users have reported that they like that in the online contact can be simultaneously involved in many activities (54.3% share) which spurs more interest in the ages of 13-15 years. Also, subjects characterize internet communication as a pleasant pastime leisure (31.2% share) and a break from their homework (rate 46.8%). Then the boys more than girls consider entertaining the prospect of establishing relationships with the opposite sex through the online contact, taking information for the new games that can be played on the computer (share 51.2%) as well as viewing of nude photos, activity non-liking for girls. Finally, subjects belonging to ages 13-15 find it fun to use patter language among members of friendly parties by their Internet contact. Finally, they were identified incidents which boys find entertaining even cyber bullying (25%) under the form of verbal aggression.

Topics discussed. The research subjects were asked to choose from a list of preferable topics in an online discussion those of the most important to them and classify them based on this criterion. The processing of the results to this question showed that "personal issues of friendly gang" come first in the preference of users, an element which is also identified by the results of the content analysis within the sociological analysis of sample conversations. Research conducted within the EU Kids Online project led by the LSE (London School of Economics and Political Science) on the occasion of the "Safer Internet Day 2011" showed that "nearly half of young people aged 11-16 years in Europe agree that it is easier being "themselves" online than in their interpersonal relationships, and one in eight (12%) agree with this completely. Another finding is that almost half of young people who participated in the survey (45%) discuss different issues on the Internet than when they do face to face discussions and the third (32%) speaks on the
Internet for personal matters that do not affect face to face discussions. These research findings show that when teenagers communicate via the internet brings them in less embarrassment than interpersonal communication. According to researchers from the EU Kids Online, experimentation with identity is part of puberty, so those who say that it is "partly true" that they feel more like "themselves" on the internet, can enjoy the benefits of online communication - for example, may be less embarrassing to discuss a few issues online than in person.

4. Conclusions
Chatting has evolved into a preferable way of communicating especially among young people.
The language code that is used in sending messages during a communication via internet is quite different from the common verbal or written language. This is due, mainly, to the fact that this language code resembles the written language in its forming and the verbal language in its structure. This conclusion comes after examining 4560 dialogue lines and noting their features. As far as syntax is concerned the influence of the verbal code is obvious since there are many elements of orality evident in the messages that users sent. Moreover users tend to use abbreviations and emoticons so as to send as quickly as possible their statement and they express their emotions through extensive use of emotional speech acts. They also tend to use words coming from the common language and they avoid insulting vocabulary. The public conversations differ from the private ones in the greater use of abbreviations, slang language and expressive speech acts.

From the sociology point of view, young users prefer chatting to other means of communication because their friends use it and because of the multifunctional environment that networking sites offer to them. Their attitude towards chatting is both positive and negative. They appreciate the possibility offered to them by chatting to communicate with their friends but they feel insecure about the authenticity of relationships formed through internet communication. Especially girls tend to be more anxious about this issue whereas boys in the contrary seem to be more relaxed with the possibility of meeting in real life someone they meet in chat or view nude photographs for that reason. Besides boys tend to find chatting as a nice way of entertainment since they collect information about new P/C games. Finally the discussion topics that young people indulge with during chatting are those that have to do with personal issues of the friendly group.

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Ελευθεροτυπία (19/1/2011) Πληθαίνουν οι χρήσεις του facebook στην Ελλάδα πληθαίνουν και οι

Brief biography

Anastasia Kappatou is a teacher and holds a master’s degree from the Faculty of Education of
Florina. Also she has a doctorate on the linguistic and sociological analysis of online discussions
among young people by the University Of Western Macedonia. Her scientific interest is focused
on issues of sociolinguistics character.
Linguistic phenomena observed in translating multiple sentences from English into Albanian: The case of Alice’s Adventures in Wonderland

Eriola Qafzezi
Fan S. Noli University, Department of Foreign Languages, Faculty of Education and Philology, eriola_bonja@yahoo.com

Abstract
The aim of this article is to observe linguistic phenomena that occur when we translate multiple sentences from English into Albanian language. In order fulfill this aim we have selected one of the most famous books ever written in English language - Alice’s Adventures in Wonderland. The reasons for this selection are multifold: first, this book has always attracted readers all over the world, whatever their age; secondly, it presents a challenge to translators as a result of different implications interwoven in the original; thirdly and most importantly, it serves as a good source of illustrative examples since the sentences in the original are never monotonously built alike and they can be used as interesting examples which will attract both teachers and learners respectively in the process of teaching and learning English as a foreign language. The first part of the paper introduces some insights into comparative linguistic studies and their relevance to translation studies and to the present study. Then we will proceed by presenting the way multiple sentences are classified in both English and Albanian language. In order to fulfill the aims of this study, we will compare multiple sentences traced in the original to the corresponding sentences in Albanian. The comparison of the English sentences with the Albanian counterparts will point out similarities and differences between these two languages concerning sentence structure and use of conjunctions. Several tables and charts will be presented with the aim of concretizing the results of our study. The paper will be completed by some conclusions referring specifically to the translation of multiple sentences in the corpus analyzed and phenomena observed in translation of multiple sentences in general.

Keywords: complex, compound, sentence, conjunctions, syndetic, asyndetic

1. Introduction
This article takes it impetus from comparative linguistics in the field of literary translation. It aims at investigating the phenomena that occur when we translate multiple sentences from English into Albanian. To fulfill this aim, we have chosen Alice’s Adventures in Wonderland as a case. We have traced multiple sentences in the original and parallel reading and comparison to the Albanian variant has helped us identify different phenomena that characterize translation of multiple sentences from English into Albanian. Tables and charts included in this paper will serve the aim of explicating the occurrence and frequency of each phenomenon. We hope that translators, teachers and learners will find this article useful in order to explore on the linguistic phenomena described and refer to the conclusions outlined by the end of this paper whenever they will approach translation of multiple sentences.

2. Literature Review
In order to relate this study to the background of similar studies carried out in the field of contrastive linguistic analyses, it is necessary to present some information to inform the readers about them. Contrastive linguistics studies were firstly initiated by Charles
Carpenter Fries in the 1940s based on the assumption that “the most effective materials (in foreign language teaching) are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner”\(^1\). This project was put into practice by Robert Lado in 1957, who introduced comparative studies among English and Spanish. In the 1970s and 1980s a series of publications were issued, which did not focus primarily on didactic aims\(^2\), but basically on the consideration of contrastive linguistics as “typological comparison”\(^3\). This new kind of approach to contrastive linguistic analysis is particularly evident in John Hawkins’ study A Comparative Typology of English and German – Unifying the Contrasts. Among the main aims of this study was the identification of correlations in syntax and morphology. Despite certain weaknesses concerning generalizations, it is generally acknowledged that Hawkins’ study was truly valuable in so far as it threw light on language comparison, without necessarily referring to second language acquisition\(^4\).

Following the historical line, during the 1980s and 1990s there can be observed new topics introduced in contrastive linguistics, such as studies in the field pragmatics and discourse, as well as corpus-based studies\(^5\). That is how contrastive linguistic analysis became relevant to comparative translation studies. The present article aims to serve as a modest contribution in the field of literary translation and contrastive linguistic analysis, in order to aid translators, teachers and students who are involved in similar studies in relative fields, more explicitly translation of multiple sentences from English into Albanian.

3. Types of sentences in English language

For the purposes of this article we need to present a classification of the types of sentences in English language, focusing our attention on multiple sentences and their types and subtypes. The information about this classification is extracted from the book A comprehensive grammar of the English language by Randolph Quirk, Sidney Greenbaum, Geoffrey Leech, Jan Svartvik (2004). The classification of the sentences presented shortly is needed in order to analyze better the examples in part 3 and 4 of this article.

Sentences are either simple or multiple. A simple sentence consists of a single independent clause. A multiple sentence contains one or more clauses as its immediate constituents. Multiple sentences are either compound or complex. In a compound sentence the immediate constituents are two or more coordinate clauses. In a complex sentence one or more of its elements are realized by a subordinate clause\(^6\).

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1 C. Fries (1945: 9).
4 For criticism against generalizations in Hawkins’ study refer to Kortmann & Meyer (1992), Rohdenburg (1992).
5 For further details see House & Blum-Kulka (1986) and Oleksy (1989).
6 R. Quirk et. al. (2004: 719).
Table 1: Types of sentences in English language

<table>
<thead>
<tr>
<th>Simple sentences</th>
<th>Multiple sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single independent clause</td>
<td>Compound (two or more coordinate clauses)</td>
</tr>
<tr>
<td></td>
<td>Complex (subordinate clauses)</td>
</tr>
</tbody>
</table>

We find information about coordination when the authors discuss about simple coordination, which is defined as coordination of single grammatical constituents such as clauses, predications, phrases and words.7

Table 2: Types of simple coordination in English language

<table>
<thead>
<tr>
<th>Types of simple coordination</th>
<th>Coordination of clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent clauses</td>
<td>Dependent clauses</td>
</tr>
<tr>
<td>Coordination of predicates (predicates sharing the same subject)</td>
<td>Non-finite dependent clauses</td>
</tr>
<tr>
<td>Coordination of noun phrases and their constituents</td>
<td></td>
</tr>
<tr>
<td>Subject</td>
<td>Object</td>
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<td>complement</td>
<td>complement</td>
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</tbody>
</table>

Coordination of verbs and verb phrases

Main verbs | Auxiliary verbs

Coordination of adjectives and adjective phrases
Coordination of adverbs and adverb phrases
Coordination of prepositions and prepositional phrases
Mixed coordination of adverbials
Coordination of subordinators
Coordination of interrogative words and relative pronouns

For the purposes of this article we need to present more information about the organization of the multiple sentences. We find this information in Chapter 14 of the above-mentioned grammar book.

The multiple sentences consist of more than one clause. The major types of multiple sentences are the compound and the complex sentence. A compound sentence consists of two or more coordinated main clauses. The complex sentence is like a simple sentence in that it consists of only one main clause, but unlike a simple sentence in that it has one or more subordinated clauses functioning as an element of the sentence.8

Referring to Chapter 15 we discover that subordinate clauses may function as subject, object, complement, or adverbial in a superordinate clause. (Quirk et. al. 2004:1047)

In Table 3, we present the major categories of subordinate clauses: nominal, adverbial, relative and comparative (Quirk et. al. 2004: 1047-1068).

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7 Information presented in Table 2 – Types of simple coordination is based on the discussion about coordination, Chapter 13 of A comprehensive grammar of the English language (2004: 946-970).
8 R. Quirk et. al. (2004: 987).
Table 3: Major categories of subordinate clauses in English language

<table>
<thead>
<tr>
<th>Major categories of subordinate clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
</tr>
<tr>
<td>Adverbial</td>
</tr>
<tr>
<td>Relative</td>
</tr>
<tr>
<td>Comparative</td>
</tr>
</tbody>
</table>

For the comparative purposes of this article, it is also necessary to provide some information about the way sentences are organized in Albanian language. This information (presented in Table 4) will be essential to compare and contrast the examples introduced in part 4 and 5 of this article and will lead us towards reaching the conclusions presented by the end of this paper.

Table 4: Types of multiple sentences in Albanian language

<table>
<thead>
<tr>
<th>Multiple Sentences</th>
<th>Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copulative</td>
<td>Comparative-Objective</td>
</tr>
<tr>
<td>Separative</td>
<td>Conclusive</td>
</tr>
<tr>
<td>Reason-Motivating</td>
<td></td>
</tr>
</tbody>
</table>

**Functional classification** (function of subordinate clause)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Predicate</th>
<th>Object</th>
<th>Attribute</th>
<th>Adverbial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>Indirect</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Formal-grammatical classification** (use of connectives)

<table>
<thead>
<tr>
<th>Syndetic</th>
<th>Asyndetic</th>
</tr>
</thead>
</table>

4. Comparative examples

Translation allow us to clarify certain linguistic phenomena which otherwise would remain undiscovered.\(^9\)

Having outlined the different types of multiple sentences, let us analyze some sample sentences taken from Alice’s Adventures in Wonderland and compare them with their translated variants in Albanian language. Examples given include first sentences written in italics which are taken from the English Source Text (ST), whereas the sentences that follow are from the Albanian Target Text (TT). For the purposes of this article, there have been analyzed a total of 655 sentences from ST and they have been compared with their TT counterparts. Then sentences have been grouped according to the phenomena observed in translation, for example, whether they preserve the same structure of the sentence and/or type of clause as in the SL, whether the structure of the sentence has been simplified, whether the conjunction is omitted, etc. Table 6 will serve the purpose of exemplifying the phenomena observed and the frequency each of them occupies in


\(^10\) The information about the way sentences are organized in Albanian language is taken from “Gramatika e Gjuhës Shqipe 2” (2002). This book gives a detailed categorization of sentences and their parts (the discussion is extended in chapters XXII-XL (pages 423-637), however, within the aims of this article, we have extracted the relevant information and summarized it as presented in Table 4.

translation. Then each of the phenomena will be illustrated by examples. Tables and charts are given in order to derive conclusions about the linguistic phenomena observed in the translation of multiple sentences.

Table 5: Linguistic phenomena observed in the translation of multiple sentences

<table>
<thead>
<tr>
<th>Linguistic phenomenon observed</th>
<th>Frequency of usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concordances / similarities in type and structure</td>
<td>38%</td>
</tr>
<tr>
<td>Segmentation of multiple sentence</td>
<td>17%</td>
</tr>
<tr>
<td>Simple sentence SL – Multiple sentence TL</td>
<td>7%</td>
</tr>
<tr>
<td>Lack of concordances</td>
<td></td>
</tr>
<tr>
<td>Simplified sentence structure in TL</td>
<td>7%</td>
</tr>
<tr>
<td>Multiple sentence SL – Simple sentence TL</td>
<td>4% 35%</td>
</tr>
<tr>
<td>Change of clause type</td>
<td>7%</td>
</tr>
<tr>
<td>More elaborate sentence structure in TL</td>
<td>10%</td>
</tr>
<tr>
<td>Use of conjunctions</td>
<td></td>
</tr>
<tr>
<td>Asyndetic SL – Syndetic TL</td>
<td>8%</td>
</tr>
<tr>
<td>Syndetic SL – Asyndetic TL</td>
<td>2%</td>
</tr>
</tbody>
</table>

Chart 1: Linguistic phenomena observed in the translation of multiple sentences

We can easily observe that the two phenomena – concordances / similarities in sentence structure and lack of concordances in sentence structure – occupy almost the same range of frequency in translation of the corpus selected. A significant number of multiple sentences have been segmented. In other cases, conjunctions have been provided by the translator even if they were not present in SL, whereas, in few cases, conjunctions found in SL sentences were omitted in translation.
The phenomenon described as *lack of concordances* includes several other sub-phenomena in itself, which is the reason why we are representing it by a separate table. We may thus observe that the most frequent phenomenon is that of elaborating the structure of the ST sentence, followed in range of frequency by other linguistic phenomena (simplified sentence structure, multiple sentence instead of simple sentence or vice versa) as shown in the chart above.

Having statistically represented the linguistic phenomena observed in the translation of multiple sentences (Table 5, Chart 1 & 2), we continue this article by giving concrete examples to illustrate each of the phenomena outlined above.

### 4.1 Concordances or similarities in type and structure of compound and / or complex sentences from SL into TL (38%)

**However**, *she soon made out that she was in the pool of tears which she had wept when she was nine feet high.* (p. 22)

**Por** shpejt u kujtua se ishte në pellgun e lotëve që kish derdhur vetë kur ishte tre metra e gjatë. (p. 24)

We can easily observe similarities in the structure of the sentences and the function of the clauses. In the original English sentence the main clause *[she soon made out]* is followed by a subordinate nominal clause in the function of a direct object [that she was in the pool of tears], then by a subordinate relative clause [which she had wept], and lastly by a subordinate adverbial clause of time [when she was nine feet high]. The Albanian sentence follows the same structure: main clause *[shpejt u kujtua]*, subordinate nominal clause *[se ishte në pellgun e lotëve]*, subordinate relative clause *[që kish derdhur vetë]*, subordinate adverbial clause of time *[kur ishte tre metra e gjatë]*. The only change that can be pointed out is that the nominal clause in the Albanian language is in the function of the subject.

**Would YOU like cats if you were me?** (p. 24)

**A do t’i doje ti macet po të ishe në vendin tim?** (p. 26)

In both sentences we observe the same structure: main clause + subordinate adverbial clause of condition. The order in which the clauses appear is the same in both languages: *would you like cats* + *if you were me* and *a do t’i dojshë ti macet* + *po të ishe në
This example also serves to illustrate the preservation of the same structure of the complex sentence in translation: main clause + subordinate adverbial clause of condition. Not only the structure, but also the same order and the same type of clauses is preserved: [we won’t talk about her any more] + [if you’d rather not] and [s’po flasim më për të] + [po qe se s’të pëlqen].

Both sentences have the same structure and types of clauses: main clause + subordinate nominal clause in the function of a direct object. In both languages it is the subordinated clause is preceded by the main clause: [I do wonder] + [what can have happened to me] and [Me të vërtetë çuditem] + [se ç’do të më ketë ndodhur].

In the original, the complex sentence is made up by a main clause [they’d take the roof off] and a subordinate conditional clause [if they had any sense]. The independent clause appears the first, which is also the order of the clauses in the sentence in Albanian language: subordinate clause of condition [sikur t’ua priste pak] followed by the main clause [do të zbulonin çatinë].

The sentence in the original follows this structure: main clause [Alice thought the whole thing very absurd] + coordinated clause of contrast [but they all looked so grave that she did not dare to laugh]. Similarly, the structure of the sentence in Albanian is main clause [Të gjitha këto Lizës i dukeshin fare të kota] + coordinated clause of contrast [por ata ishin seriozë] + subordinate clause of result [sa ajo s’guxonte të qeshte].

### 4.2 Segmentation of multiple sentences from SL into TL (17%)

So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the
Eriola Qafzezi: Linguistic phenomena observed in translating multiple sentences from English into Albanian: The case of Alice’s Adventures in Wonderland

To the sentence in the ST belongs one main clause [she was considering in her own mind] and several subordinate clauses, whereas, if we have a closer look at the TT, we can see that there are three corresponding sentences: the first: [main clause + subordinate nominal clause in the function of a direct object], the second: [two coordinated clauses], and, the third, which is a simple sentence.

The sentence in the ST follows the structure: main clause [she tried to fancy] + subordinate nominal clause in the function of a direct object [what the flame of a candle is like] + subordinate adverbial clause of time [after the candle is blown] + subordinate adverbial clause of reason [for she could not remember ever having seen such a thing]. We can see that in the TL there are two sentences: the first consists of main clause [U përpoq të përfytyronte flakën e qiririt pasi ky është shuar fare] + subordinate adverbial clause of time [pasi ky është shuar fare], the second consists of main clause [nuk i kujtohej] + subordinate nominal clause in the function of a subject [ta kish parë ndonjëherë].

The sentence in SL consists of main clause [she had never been so much contradicted in her life before] + main coordinated clause [and she felt] + subordinated nominal clause in the function of a direct object [that she was losing her temper]. The structure of the sentence appears to be simplified in TL: there are two corresponding sentences: a simple one [Asnjëherë në jetën e saj s’e kishin kundërshtuar kaq shumë. E kuptoi se po humbiste durimin] + a complex one consisting of a main clause [E kuptoi] + a nominal subordinated clause in the function of a direct object [po humbiste durimin].

4.3 Lack of concordances in sentence type and structure (35%)

4.3.1 Simple sentence in SL – Multiple sentence in TL (7%)

The sentence in SL is simple, whereas the sentence in TL is complex following the structure: main clause [a di] + subordinate nominal clause in the function of a direct object [si mund të dilet nga ky pellg].
To the simple sentence in SL corresponds a complex sentence in TL (main clause *Ti më fyen vazhdimisht me ato marrëzi që flet* + subordinate relative clause *që flet*).

Again, to the simple sentence in SL corresponds a complex sentence in TL (main clause *Por këtë radhë di unë si të veproj* + subordinate nominal clause in the function of a direct object *si të veproj*).

### 4.3.2 Simplified sentence structure in TL (reduced number of clauses in TL) (7%)

The sentence in the SL follows this pattern: "main clause *she looked up* + subordinate adverbial clause of time + main coordinated clause *and there was the Cat again, sitting on a branch of a tree*. To the subordinate adverbial of time in the SL sentence *as she said this* corresponds a prepositional phrase in the function of an adverbial, and, as a result, the number of clauses in TL has been reduced.

The sentence in the SL is more elaborate: main clause [the cook threw a frying pan after her] + subordinate clause of time [as she went] + coordinated clause of contrast [but it just missed her]. The sentence in TL appears simplified in its structure: main clause [Gjellëbërësja i hodhi nga pas një tigan] + coordinated clause of contrast [por nuk e goditi].
4.3.3 Multiple sentence in SL – Simple sentence in TL (4%)  

The original sentence structure “main clause [the door led right into a large kitchen] + subordinate relative clause [which was full of smoke from one end to the other] is changed and we can easily see that the TL sentence is a simple one (to the relative clause corresponds an appositive phrase).

She had not gone much farther before she came in sight of the house of the March Hare. (p. 77)

Dera të shpinte në një kuzhinë të madhe, gjithë tym. (p. 66)

The ST sentence is a complex one, consisting of a main clause [she had not gone much farther] + an adverbial subordinated clause of time [before she came in sight of the house of the March Hare]. In the Albanian variant there is a single simple sentence (to the verb in the main clause corresponds a non finite verb form, which turns the sentence into a simple one).

4.3.4 Change of clause type from SL into TL (7%)  

And she began fancying the sort of thing that would happen. (p. 38)

E menjëherë filloi të mendonte se ç’mund t’i ndodhte në shtëpi. (p. 40)

Both sentences are complex but in the SL the main clause [she began fancying the sort of thing] is followed by a subordinate relative clause [that would happen], whereas in TL the main clause [menjëherë filloi të mendonte] is followed by a nominal subordinated clause in the function of a direct object [se ç’mund t’i ndodhte në shtëpi].

Then they both bowed low, and their curls got entangled together. (p. 64)

Pas kësaj, të dy bënë një për kulje aq të madhe sa ngatërruan leshrat me njëri-tjetrin. (p. 64)

The sentence in ST is compound, consisting of two coordinated clauses [they both bowed low] + [their curls got entangled together]. The sentence in TT is complex, consisting of main clause [të dy bënë një përkulje aq të madhe] + subordinate adverbial clause of result [sa ngatërruan leshrat me njëri-tjetrin].

The Cat seemed to think that there was enough of it now in sight, and no more of it appeared. (p. 101)

Macja mendonte se kishte treguar një pjesë të mirë të vetvetes, prandaj nuk u rrit më. (p. 98)

The sentence in SL consists of main clause [the cat seemed to think] + subordinated nominal clause in the function of a direct object [that there was enough of it now in sight] + coordinated clause of addition [and no more of it appeared]. The sentence in TL consists of main clause [macja mendonte] + subordinate nominal clause in the function of a direct
object [se kishte treguar një pjesë të mirë të vetvetes] + subordinate clause of result [prandaj nuk u rrit më].

4.3.5 More elaborate sentence structure in TL (additional clause in TL) (10%)

So she stood still where she was, and waited.  
Kështu vendosi φ të qëndronte ashtu sic qe dhe të priste. (p. 91)

The sentence structure in SL exemplifies a main clause [she stood still] + subordinate adverbial clause of place [where she was] + coordinated main clause [and waited]. The sentence structure in TL follows this pattern “main clause [kështu vendosi] + nominal subordinate clause in the function of a direct object [të qëndronte] + subordinate clause of comparison [ashtu sic qe] + nominal subordinated clause in the function of a direct object [dhe të priste]. This last nominal clause [dhe të priste] is coordinated to the other nominal clause [të qëndronte], both in the function of a direct object. The number of clauses is greater in TL.

Here the Queen put on her spectacles, and began staring at the Hatter, who turned pale and fidgeted. (p. 139)

The sentence in the ST consists of a main clause [here the Queen put on her spectacles] + coordinated main clause [and began staring at the Hatter] + subordinate relative clause [who turned pale and fidgeted]. The structure is almost the same in TL: main clause [Ne këto e sipër Mbretëresha vuri syzet dhe ia nguli sytë dëshmitarit, i cili filloi të dridhej dhe u zverdh nga frika].

5. Use of conjunctions

Part of the attention of this article is devoted to the use of conjunctions and what kind of changes might be witnessed during translation of complex and compound sentences in this respect. In chapter 13, discussing about coordination, the authors mention that this term is used by some grammarians for both syndetic (or linked) coordination, and asyndetic (or unlinked) coordination. The two constructions are differentiated by the fact that syndetic coordination is marked by overt signals of coordination (and, or, but), whereas asyndetic coordination is not overtly marked. Syndetic coordination is the more usual form, whereas asyndetic coordination is usually stylistically marked and it is used for dramatic intensification or to suggest an open-ended list12.

5.1 Asyndetic sentence in SL – Syndetic sentence in TL (8%)

I'm afraid φ13 I can't put it more clearly. (p. 52)
Kam frikë se s’mund të shpjegohem.

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12 R. Quirk et. al. (2004: 918).
13 We use this symbol - φ - to indicate the lack of conjunction.
The original sentence consists of a main clause [I’m afraid] + a nominal subordinated clause [I can’t put it more clearly]. No conjunction is used in this case, whereas in the translated sentence the structure is almost the same, but to the sentence pattern is also added a conjunction.

“I can see φ you’re trying to invent something”  (p. 60)  “E shoh se po mundohesh të shpifësh diçka.” (p. 60)

The sentence in the SL consists of a main clause [I can see] + a subordinated nominal clause in the function of a direct object [you’re trying to invent something]. The structure of the complex sentence and the types of clauses are the same in TL: main clause [E shoh] + subordinate nominal clause in the function of a direct object [se po mundohesh të shpifësh diçka]; the only difference is that the clauses are linked by a conjunction which is missing in the original and has been added by the translator.

“That’s the most important piece of evidence φ we’ve heard yet.”  (p. 152)  “Kjo është dëshmia më e rëndëshime që kemi dëgjuar deri tani.” (p. 147)

The structure of the sentence is the same in both ST and TT: main clause + subordinated relative clause. There is no conjunction used in ST, whereas the subordinated clause in TT is preceded by a conjunction.

5.2 Syndetic sentence in SL - Asyndetic sentence in TL (2%)

“One side will make you grow taller, and the other side will make you grow shorter.”  (p. 57)  “Njera anë të rrit, φ tjetra të shkurton!”  (p. 57)

Both sentences are compound, but in the ST the sentence is syndetic (the conjunction used is “and” showing contrast), whereas in TT there is no conjunction at all.

And as she could not think of anything to say, she simply bowed, and took the thimble, looking as solemn as she could.  (p. 32)  Prandaj, meqë s’dinte ç’të thoshte, u përkuël në shenjë nderimi, φ mori gishtëzën dhe u përpoq të dukej më serioze. (p. 34)

We can see from the examples that the conjunction and used to coordinate the clauses in the SL is absent in the TL.

In a minute or two the Caterpillar took the hookah out of its mouth, and yawned once or twice, and shook itself.  (p. 57)  Pas pak, Vemja e hoqi llullën, φ gogësiti nja dy a tri herë dhe u shkund. (p. 57)
6. Conclusions

This article serves the purpose of illustrating different linguistic phenomena occurring during the translation of multiple sentences from English into Albanian. Aiming at contributing to contrastive linguistic studies, we have brought a series of examples, the thorough analysis of which has helped us draw the following conclusions:

- Based on the corpus selected, we can summarize the main linguistic phenomena observed in the translation of multiple sentences as follows: the sentence structure may be preserved or abandoned by segmentation of the original sentence, change of clause type, the sentence may appear more elaborated or simplified than it is in the original, conjunctions may not be used or they may supplied when missing in the original.

- 38% of the translated sentences into Albanian preserve the same or almost the same sentence structure as in the original SL, whereas in 35% of the selected corpus there are no concordances in sentence structure. The volume occupied by these two opposing phenomena (concordances in sentence structure vs. lack of concordances in sentence structure) is almost the same which shows that, depending on the structure and type of the original sentence, the translator can choose whether to preserve the SL structure or not.

- We have observed the phenomenon of segmentation of multiple sentences in 17% of the sentences translated. The reasons which have made the translator segment or divide a multiple sentence into several multiple or simple sentences may be different, however, we think that this has mainly been used as a strategy in those cases when the structure in the original is far too complicated or elaborated to follow.

- Among the sub-phenomena included in lack of concordances, we can see that 7% is occupied by simplified sentence structure and 4% by the change of a compound sentence into a simple sentence, which makes a total of 11%. If we add this 11% up to the 17% of the cases of simplification, the total goes to 28%, which means that in a considerable number of cases the sentence structure has been simplified either by segmentation of the sentence or reduced number of clauses in a multiple sentence. On the other hand, we observe a more elaborate sentence structure in 10% of the translated sentences and a simple sentence transformed into a multiple sentence in 7% of the cases – a total of 17%. If we compare these figures, we arrive at the conclusion that there are far more cases in which the sentence structure has been simplified (reduced number of clauses) rather than elaborated (increased number of clauses). Therefore, the general tendency used by the translator has been that of simplification, probably influenced by the fact that the target readers are children.

- As far as the use of the conjunctions is concerned, in most of the cases, the translator has supplied conjunctions even when they were missing in the original, thereby making more explicit meaning relations. This tendency again goes to show that the general tendency used by the translator is simplification and explicitation.

- In the majority of cases, translators have delivered the same message, but this does not imply that the structure of the sentence has remained unaltered. This clearly shows that the original message should not be identified with specific elements that are particular to the SL (i.e. English).

- Equivalence exists in the level of the message itself and not the outer form or way it is structured.
Comparing the two languages is one of the best ways to discover how languages express meaning and how they function, which is peculiar to every language.

7. Relevance of this article for future research

This article lends itself to interesting insights in the future since it can serve as the basis for more in-depth comparative studies in translation in general, and translation of children’s literature in specific. The comparison can start from structural changes in the level of the sentence and examples can also be taken from other books representative of children’s literature. Being based in authentic examples, the study will be more inclusive and interesting. On the other hand, teachers can be aided in the process of teaching English as a foreign language by making use of several examples to demonstrate syntactic changes in the level of the sentence. We also think that this article will be useful even to translators, who can observe some strategies to translate complex or compound sentences and reflect on the use of conjunctions.

References


Brief biography

Eriola Qafzezi (MSc. University of Tirana, Albania) is a Lecturer of Translation and Text Analysis at the Department of Foreign Languages of Fan S. Noli University of Korça. She is currently following a Ph.D. in translation of children’s literature. Her research interests and publications focus on literary translation, translation of children’s literature, and cultural issues in translation and communication.
Media and literacy: Evidence from elementary school students’ literacy practices and the current teaching practices in Greece

Anna Fterniati
University of Patras
afterniati@upatras.gr

Argiris Archakis
University of Patras
archakis@upatras.gr

Villy Tsakona
Democritus University of Thrace
villytsa@otenet.gr

Vasia Tsami
University of Patras
tsamibasil@yahoo.gr

Abstract
Mass cultural genres have recently started being part of school curricula, since texts such as TV shows, comics, magazine articles, songs, and webpages form a significant part of students’ everyday literacy practices. In this context, the exploitation of mass cultural texts in language arts aims at cultivating students’ literacy skills. The present study first offers a brief overview of the literature on whether and to what degree the current Greek elementary school teaching material takes into consideration, and makes use of, students’ everyday experiences and habits. Then, it investigates students’ access to media where mass cultural genres can be found, as well as their literacy practices related to mass cultural genres. The data presented here comes from a research conducted in 5 public elementary schools in the prefecture of Achaia, Greece, where 165 students of the 5th and the 6th grade participated (11-12 year-olds). The findings of the study indicate that elementary school students have easy access to mass culture media, while their most common literacy practices involve watching TV programs and surfing the net. Such practices, however, have not so far been taken into consideration for the compilation of Greek language teaching material. Consequently, our findings could form the basis for specific proposals concerning the mass cultural genres which could be included in Greek elementary school teaching material.

Keywords: literacy practices, mass cultural texts, elementary school students, language textbooks, teaching material, multimodality

1. Introduction
During the past few decades, mass cultural texts have started being part of school curricula, since texts such as TV shows, comics, magazine articles, songs, and webpages form a significant part of students’ everyday literacy practices. In this context, the exploitation of mass cultural texts in language arts aims at cultivating students’ literacy skills. The present study first offers a brief overview of the literature on whether and to what degree the current Greek elementary school teaching material takes into consideration, and makes use of, students’ everyday experiences and habits. Then, it investigates students’ access to media where mass cultural genres can be found, as well as their literacy practices related to mass cultural genres. The data presented here comes from a research conducted in 5 public elementary schools in the prefecture of Achaia, Greece, where 165 students of the 5th and the 6th grade participated (11-12 year-olds). The findings of the study indicate that elementary school students have easy access to mass culture media, while their most common literacy practices involve watching TV programs and surfing the net. Such practices, however, have not so far been taken into consideration for the compilation of Greek language teaching material. Consequently, our findings could form the basis for specific proposals concerning the mass cultural genres which could be included in Greek elementary school teaching material.

Keywords: literacy practices, mass cultural texts, elementary school students, language textbooks, teaching material, multimodality

1 The present study was conducted in the context of the Operational Program “Education and Lifelong Learning” and has been co-funded by the EU (European Social Fund) and national resources. In particular, it is part of the Greek research program Thalis (2011-2015), entitled: “Linguistic variation and language ideologies in mass cultural texts: Design, development and assessment of learning material for critical language awareness” (Ministry of Education and Religious Affairs, Funding ID: MIS 375599). The authors would like to thank John Katsillis, Professor at the Department of Primary Education of the University of Patras, for his helpful suggestions on the questionnaire design.
curricula (see, among others, Alvermann et al. 1999, Stevens 2001, Morrell 2002). Texts such as TV shows, printed material in wide social circulation, songs, and webpages form a significant part of students’ everyday practices (Facer et al. 2003, Rideout et al. 2003, Marsh et al. 2005, Snyder et al. 2008, Koutsogiannis 2011), hence their recontextualization (in Bernstein’s 1996 sense) seems to contribute to enhancing students’ creative participation and involvement in language courses, and their ability to understand abstract scientific concepts (Duff 2004). In general, the exploitation of mass cultural texts in language arts aims at cultivating students’ literacy skills, whereby literacy is viewed as the ability to process oral, written, and multimodal texts in an effective and critical way in a variety of contexts (Barton 1994, Baynham 1995).

In Greece, the need to update the teaching methodology in language arts has led to the revision of the curricula and teaching material used in elementary education (5-12-year-olds; see Fterniati 2007a, 2007b). Since the academic year 2006-2007 new teaching material (Ministry of Education and Religious Affairs-Pedagogical Institute 2006a) has been used. The guidelines included therein (Ministry of Education and Religious Affairs-Pedagogical Institute 2003, 2006b) allow for this material’s constant updating and improvement, while special emphasis is placed on teachers’ abilities and attitudes. Teachers are considered responsible for formulating specific teaching goals, allocating time to diverse literacy activities, and designing the teaching material. Given the above, school textbooks provide only some main points for elaboration in class, while they also allow for establishing connections with other school subjects (besides language arts) and school activities. What is more, in-school and out-of-school contexts of language use are connected: school literacy practices are expected to interact with out-of-school ones during language courses based on cross curricular activities and projects (Fterniati 2007a, 2010).

The current curricula and teaching material seem to underline the importance of taking into consideration students’ experiences with texts coming from their everyday social environments (Fterniati 2009, 2010). This is compatible with some of the main principles of what is defined by the New London Group (1996) as situated practice within the multiliteracies framework (see also Kalantzis & Cope 1999). Situated practice involves the use of various students’ cultural, socio-, and text-linguistic experiences in designing the school material and in language teaching in general.

The present study first offers a brief overview of the literature on whether and to what degree the current elementary school teaching material and practices (as proposed by the Greek curriculum and the teachers’ manuals) take into account, and make use of, students’ everyday experiences and habits (section 2). It is in this context that we investigate students’ access to the media, where mass cultural texts can be found, as well as the frequency by which they come into contact with mass cultural texts. Our study involves elementary school students of the 5th and 6th grade (11-12 year-olds). The methodology and the data collection medium and process are described in section (3),  

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2 The term teaching material refers to both students’ textbooks and teachers’ manuals. Teachers’ manuals together with the curriculum for language arts (Ministry of Education and Religious Affairs-Pedagogical Institute 2003) provide the directives and guidelines teaching practices are expected to be based on. To the best of our knowledge, there do not seem to be any studies investigating teachers’ actual teaching practices in Greek elementary schools since 2006-2007, that is, since the introduction of the new teaching material. Hence, here we will limit our discussion to the teaching material and the curricula available to Greek teachers.
while the results appear in section (4). The final section (5) presents some concluding remarks based on the comparison between the mass cultural literacy practices included in the current teaching material (as discussed in the relevant literature), and those which are actually on the top of the students' choices.

2. The current teaching material and the proposed teaching practices

In the present section, we provide a summary of the main studies exploring whether and to what extent the compilation of the contemporary language textbooks used in Greek elementary schools is based on students' literacy practices involving mass cultural texts. The present summary will form the basis for the comparison between the mass cultural literacy practices included in these textbooks and those which seem to be common among elementary school students. Such a comparison will further lead us to suggestions concerning the mass cultural genres which could be exploited in language arts (see section 5).

First of all, Fterniati & Goloni (2009) and Fterniati (2010) aim, among other things, at establishing to what extent elementary school language textbooks include texts coming from students' everyday lives and social realities, so that they become attractive to students and increase their interest in learning in class. Both studies investigate whether these textbooks conform to the main principles of what is called situated practice in the multiliteracies framework of language teaching (see section 1). Their findings suggest that the majority of the texts included in the textbooks are authentic and are not written especially for educational purposes. Among them, literary texts are less than half of the number of non-literary texts, that is, texts belonging to informative and persuasive genres. In other words, it seems that these textbooks have been enriched with texts in wide social circulation and that the proposed teaching practices do no longer favor the use of literary texts for language teaching. Nevertheless, Dinas & Xanthopoulos (2007) claim that, although the percentage of authentic texts in elementary school textbooks has indeed increased, it is not high enough for textbooks which are supposed to follow the communicative-genre based approach to language teaching.

What is more, Fterniati & Markopoulou (2008) and Fterniati (2009, 2010) suggest that elementary school language textbooks include a significant number of multimodal texts (almost half of the texts included therein) as well as some activities involving the production of multimodal texts by students. Thus, these textbooks seem to be adapted to current communicative settings and practices, where multimodality, namely the production of meaning via the simultaneous use of different modalities (e.g. language, still or moving images, sounds, music), prevails. It therefore seems that the changes observed in contemporary communicative contexts and affecting children's lives have influenced the selection of texts which become part of such textbooks. The fact that multimodal texts have been included in the textbooks indicates that students' literacy practices have been considered as one of the main criteria for selecting the proposed teaching material.

On the other hand, the multimodal texts included in elementary school textbooks are actually printed texts combining only written language and still images, while texts using

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other modalities (e.g. oral language, music, moving images) or digital texts are more often than not absent from language textbooks (Fterniati & Markopoulou 2008, Fterniati 2009, 2010, Dinas & Koukourikou 2011). In addition, the role of, and the interaction between, the different semiotic modes are not adequately discussed in class. Even though students are taught about how they are expected to process different semiotic modes and media, they are not often asked to produce a variety of multimodal texts nor asked to use different modes and media. In this context, Dinas & Koukourikou (2011) argue that the linguistic mode still prevails in Greek language teaching and that students’ preexisting experiences with multimodal texts are not sufficiently exploited, and further developed, in class.

At this point, it should be noted that, before the compilation of the current teaching material, there was no research on Greek students’ out-of-school literacy practices involving mass cultural (or other) genres. Since such practices appear to be an important part of their everyday social experiences (see, among others, Alvermann et al. 1999), they could, in our view, become part of contemporary, updated school textbooks. It is in this context that we consider these practices worth investigating.

As already mentioned (see section 1), the aim of the present study is to explore if and to what degree elementary school students have access to mass culture media and how often they come into contact with mass cultural texts. More specifically, we will try to investigate how often students watch TV programs, surf the net, read printed mass cultural texts, and listen to the radio and, most importantly, what kinds of TV shows, webpages, books, magazines, music, songs, etc. they are particularly interested in. The findings of our study could form the basis for specific proposals concerning the mass cultural genres which could be included in elementary school teaching material.

3. Methodology

3.1. Sample

The data examined was collected using stratified random sampling techniques: the sample was selected so that there is stratification in students’ social background which is established, on the one hand, by the social milieu of the area where their school is located and, on the other, by the educational background of their parents. The research was conducted in 5 public elementary schools in the prefecture of Achaia and 165 students of the 5th and the 6th grade participated (11-12 year-olds). During the sample selection, we made sure that our informants are boys and girls coming from diverse social groups (high, middle, low) and from Greek, Greek Roma, and non-Greek (immigrant) communities (see Archakis et al. to appear). The distribution of the students of our sample by gender, ethnic background, and the social milieu of the area where their school is located, is shown in Table 1.
Table 1: Distribution of the sample by gender, ethnic background, and the social milieu of the area where each school is located

<table>
<thead>
<tr>
<th>Student population</th>
<th>High</th>
<th>Middle to high</th>
<th>Middle</th>
<th>Middle to low</th>
<th>Low</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek students</td>
<td>Boys</td>
<td>17</td>
<td>22</td>
<td>17</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>11</td>
<td>11</td>
<td>16</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Non-Greek (immigrant) students</td>
<td>Boys</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Greek Roma students</td>
<td>Boys</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>28</td>
<td>38</td>
<td>45</td>
<td>34</td>
<td>20</td>
</tr>
</tbody>
</table>

3.2. Research instruments and procedure

Literacy practices are more often than not investigated via ethnographic methods, whereby the researcher gains access to informants’ everyday lives, so that s/he can observe and record their behavior. In the present study, however, emphasis is placed on how the students themselves perceive and record their own literacy practices involving mass cultural texts. Hence, anonymous questionnaires were considered the most suitable tool for data collection (see also Marsh 2004, Marsh et al. 2005).

Students’ questionnaire consists of 55 open and closed questions. Students’ access to mass culture media was established via a yes/no question (see Table 2 in section 4). In other closed questions however (some of which are presented below), a 5-grade scale was used to measure students’ habits concerning mass cultural literacy practices (see Tables 3-7 in section 4).

The research was conducted from the end of April 2012 until the end of May 2012. Students’ questionnaires were filled in by the students themselves while at school and in the presence of their teacher and one of the researchers. For the statistical analysis of the data, SPSS 20.0 was used.

4. Results and discussion

The questionnaires elicited a variety of information concerning students’ mass cultural literacy practices. In what follows, due to space constraints, only a limited part of the data collected is presented.

Table 2 refers to students’ access to mass culture media. Most students have access to a television set as well as to printed mass cultural texts. A small percentage of them do not have access to a computer and/or the internet, while it seems that the radio is the least common medium of all. Students’ limited use of the radio could be due to the fact that

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4 For example, students’ mass cultural literacy practices appear to correlate with their gender, ethnic and social background, and their performance in language courses (see Archakis et al. to appear).
they can tune in to their favorite radio stations via the internet. What is important here is that the vast majority of students have easy access to mass culture media, hence mass cultural literacy practices are expected to constitute a more or less significant part of their everyday lives.

**Table 2:** Home access to mass culture media

<table>
<thead>
<tr>
<th>At home, you have:</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV set</td>
<td>0.6</td>
<td>99.4</td>
</tr>
<tr>
<td>Printed mass cultural texts</td>
<td>8.0</td>
<td>92.0</td>
</tr>
<tr>
<td>Computer</td>
<td>12.1</td>
<td>87.9</td>
</tr>
<tr>
<td>Internet connection</td>
<td>16.4</td>
<td>83.6</td>
</tr>
<tr>
<td>Radio</td>
<td>17.8</td>
<td>82.2</td>
</tr>
</tbody>
</table>

Table 3 shows the frequency by which students engage in mass cultural literacy practices. It seems that their most common practices involve, first, watching TV and, second, listening to songs. Surfing the net is their third choice, while reading printed material is their last one. It could therefore be suggested that students mostly engage with multimodal texts which involve still or moving images, music, and oral discourse, while they are less fond of texts involving only written discourse and still images. In other words, students focus more on mass cultural texts which are closer to their everyday multimodal experiences: language in most authentic contexts of use is multimodal, hence we are usually expected (actually we learn from an early age) to process words, images, and sounds simultaneously (Gee & Hayes 2011: 1, 111).

These findings confirm previous research suggesting that music and songs seem to form a significant part of children’s everyday lives since preschool age (Rideout et al. 2003, Marsh et al. 2005). Simultaneously, they are compatible with studies underlining children’s strong preference for multimodal media environments, where they tend to concentrate on the visual aspects of digital texts rather than on the verbal ones (Facer et al. 2003, Koutsogiannis 2007). In addition, the present findings are in line with studies indicating that the time students spend in watching TV has not decreased despite the widespread use of the internet (Snyder et al. 2008). In particular, Koutsogiannis’ (2011: 355) observations that Greek adolescents spend an important part of their leisure time surfing the net and watching TV rather than reading printed material which is not related to their school activities, are confirmed by the present study.

**Table 3:** Mean scores of students’ engagement in mass cultural literacy practices

<table>
<thead>
<tr>
<th>How often do you engage in the following activities?</th>
<th>Mean average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watching TV shows</td>
<td>4.48</td>
<td>816</td>
</tr>
<tr>
<td>Listening to songs</td>
<td>4.45</td>
<td>817</td>
</tr>
<tr>
<td>Surfing the net</td>
<td>3.87</td>
<td>1.252</td>
</tr>
<tr>
<td>Reading printed material</td>
<td>3.53</td>
<td>1.078</td>
</tr>
</tbody>
</table>

In order to shed more light on students’ mass cultural literacy practices, Table 4 includes the most common kinds of TV shows among students. In general, students watch entertaining programs more often than they watch informative ones. Comic series appear on top of their choices, thus suggesting that humor is an important criterion for selecting
what they watch on TV. Students also watch animated films, reality shows, and films (whether Greek ones or not). They also watch advertisements, TV game shows and quiz shows, although such programs are not among the most common ones. Furthermore, it is interesting to note here that, although listening to songs is a particularly common literacy practice among students (see Table 3), watching music shows on TV is not.

In addition, students do not appear to watch TV news broadcasts or other informative programs, which means that they are not interested in sociopolitical debates and topics. This is compatible with, and reinforced by, findings concerning, on the one hand, their online literacy practices, where students do not use the web to get information but only to entertain themselves (see Table 6 below); and, on the other, their reading literacy practices: reading newspapers is students’ least common mass cultural literacy practice related to printed material (see Table 7 below). Students’ age could account for such lack of interest.

**Table 4:** Mean scores of students’ watching TV programs

<table>
<thead>
<tr>
<th>How often do you watch the following TV programs?</th>
<th>Mean average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comic series</td>
<td>4.16</td>
<td>.935</td>
</tr>
<tr>
<td>Animated series or films</td>
<td>3.95</td>
<td>1.171</td>
</tr>
<tr>
<td>Reality shows</td>
<td>3.74</td>
<td>1.080</td>
</tr>
<tr>
<td>Non-Greek movies</td>
<td>3.71</td>
<td>1.184</td>
</tr>
<tr>
<td>Greek movies</td>
<td>3.66</td>
<td>1.139</td>
</tr>
<tr>
<td>Advertisements</td>
<td>3.34</td>
<td>1.466</td>
</tr>
<tr>
<td>Game shows or quiz shows</td>
<td>3.27</td>
<td>1.333</td>
</tr>
<tr>
<td>Sports shows</td>
<td>3.15</td>
<td>1.562</td>
</tr>
<tr>
<td>Documentaries</td>
<td>3.10</td>
<td>1.208</td>
</tr>
<tr>
<td>Music shows</td>
<td>2.94</td>
<td>1.326</td>
</tr>
<tr>
<td>Drama series</td>
<td>2.64</td>
<td>1.210</td>
</tr>
<tr>
<td>Cooking shows</td>
<td>2.61</td>
<td>1.320</td>
</tr>
<tr>
<td>News shows</td>
<td>2.56</td>
<td>1.217</td>
</tr>
<tr>
<td>News broadcasts</td>
<td>2.31</td>
<td>1.279</td>
</tr>
</tbody>
</table>

As to the kinds of songs students listen to, Table 5 reveals that they usually opt for hip-hop, pop, rap, and rock songs. Children’s songs are not common among them, most probably because such songs are typically composed for younger children. Greek popular songs, art songs, folk songs, and rebetika are the least common choices among elementary school students.
Table 5: Mean scores of students’ listening to various kinds of songs

<table>
<thead>
<tr>
<th>How often do you listen to the following kinds of songs?</th>
<th>Mean average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip-hop songs</td>
<td>3.97</td>
<td>1.170</td>
</tr>
<tr>
<td>Pop songs</td>
<td>3.90</td>
<td>1.298</td>
</tr>
<tr>
<td>Rap songs</td>
<td>3.66</td>
<td>1.380</td>
</tr>
<tr>
<td>Rock songs</td>
<td>3.45</td>
<td>1.373</td>
</tr>
<tr>
<td>R ‘n’ B songs</td>
<td>3.08</td>
<td>1.442</td>
</tr>
<tr>
<td>Metal songs</td>
<td>2.75</td>
<td>1.452</td>
</tr>
<tr>
<td>Greek popular songs ([laika])⁵</td>
<td>2.46</td>
<td>1.377</td>
</tr>
<tr>
<td>Children’s songs</td>
<td>2.30</td>
<td>1.421</td>
</tr>
<tr>
<td>Greek art songs ([entechna])⁶</td>
<td>2.29</td>
<td>1.238</td>
</tr>
<tr>
<td>Greek folk/traditional songs</td>
<td>2.23</td>
<td>1.280</td>
</tr>
<tr>
<td>Rebetika⁷</td>
<td>2.19</td>
<td>2.029</td>
</tr>
</tbody>
</table>

Table 6 is dedicated to students’ online literacy practices, most of which involve entertainment. First, students usually listen to songs online and watch videoclips, whether music ones or others. It seems that the internet provides them with easy access to visualized versions of their favorite songs. Furthermore, among their most common practices are digital games (played either in groups or solo). It should be mentioned here that playing digital games constitutes a more frequent activity than watching TV ones (cf. Table 4).

Students also visit various websites in order to retrieve useful material for their homework, but they do not often look up words in online dictionaries. Sometimes they surf the net without any particular purpose in mind. Reading online blogs and newspapers is not a very common literacy practice among students, a fact which highlights the use of the internet predominantly for entertainment and not for information. This could be related to the fact that the majority of Greek newspapers address an adult audience, thus their format and topics are not designed to be attractive to younger people. Finally, students are not particularly interested in expressing their views on the web and in participating in online surveys.
Table 6: Mean scores of students’ engagement in diverse online activities

<table>
<thead>
<tr>
<th>How often do engage in the following online activities?</th>
<th>Mean average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening to songs</td>
<td>4.58</td>
<td>4.157</td>
</tr>
<tr>
<td>Watching music videos clips</td>
<td>3.84</td>
<td>1.244</td>
</tr>
<tr>
<td>Playing games solo</td>
<td>3.70</td>
<td>1.216</td>
</tr>
<tr>
<td>Playing games with others</td>
<td>3.61</td>
<td>1.302</td>
</tr>
<tr>
<td>Visiting various webpages</td>
<td>3.23</td>
<td>1.391</td>
</tr>
<tr>
<td>Looking for material to help you with your homework</td>
<td>3.06</td>
<td>1.310</td>
</tr>
<tr>
<td>Participating in online social networks (e.g. Facebook, Twitter)</td>
<td>2.92</td>
<td>1.682</td>
</tr>
<tr>
<td>Using the web for some other activity</td>
<td>2.86</td>
<td>1.658</td>
</tr>
<tr>
<td>Visiting chatrooms</td>
<td>2.46</td>
<td>1.446</td>
</tr>
<tr>
<td>Reading various blogs</td>
<td>2.41</td>
<td>1.348</td>
</tr>
<tr>
<td>Downloading ringtones for your mobile phone</td>
<td>2.33</td>
<td>1.452</td>
</tr>
<tr>
<td>Looking up words in dictionaries</td>
<td>2.22</td>
<td>1.232</td>
</tr>
<tr>
<td>Surfing without any specific purpose</td>
<td>2.10</td>
<td>1.372</td>
</tr>
<tr>
<td>Expressing your opinion in various topics</td>
<td>2.10</td>
<td>1.393</td>
</tr>
<tr>
<td>Reading online newspapers</td>
<td>1.76</td>
<td>1.137</td>
</tr>
<tr>
<td>Participating in online surveys</td>
<td>1.76</td>
<td>1.188</td>
</tr>
</tbody>
</table>

In Table 3 above, we have seen that reading printed mass cultural texts is the least popular activity among elementary school students. By elaborating on this, Table 7 shows that students usually read comic books or magazines, namely multimodal texts combining still images and written discourse. Their second choice is reading literature and their third reading magazines other than comic ones. Consulting encyclopedias and reading science books for children are less common activities at that age. Fairytales are not very common among elementary school students, most probably because such mass cultural texts are predominantly written for younger children (cf. children’s songs in Table 5). Students’ last choice is reading newspapers. In general, informative texts do not attract their attention either in their printed version or on TV or the web (see Tables 4 and 7).

Table 7: Mean scores of students’ engagement with activities involving printed mass cultural texts

<table>
<thead>
<tr>
<th>How often do you read the following printed texts?</th>
<th>Mean average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comic books or magazines</td>
<td>3.18</td>
<td>1.347</td>
</tr>
<tr>
<td>Literature</td>
<td>3.04</td>
<td>1.224</td>
</tr>
<tr>
<td>Magazines (other than comic ones)</td>
<td>2.92</td>
<td>1.303</td>
</tr>
<tr>
<td>Encyclopedias and children’s science books</td>
<td>2.89</td>
<td>1.146</td>
</tr>
<tr>
<td>Fairytales</td>
<td>2.85</td>
<td>2.749</td>
</tr>
<tr>
<td>Dictionaries</td>
<td>2.57</td>
<td>1.114</td>
</tr>
<tr>
<td>Newspapers</td>
<td>2.17</td>
<td>1.236</td>
</tr>
</tbody>
</table>

In sum, the results presented in this section bring to surface a wide variety of mass
cultural literacy practices and genres that belong to Greek elementary school students’ everyday experiences. Multimodality appears to be a salient feature of most of these genres, hence school curricula and teaching practices aiming at attracting students’ attention and cultivating their literacy skills would be expected to place particular emphasis on multimodal texts. More specifically, texts combining oral discourse, moving images and music would be expected to prevail in language teaching material rather than those involving only written discourse and still images. In addition, entertainment texts would also be expected to be used in language teaching rather than exclusively informative ones.

5. Concluding remarks

The present study reveals that the majority of Greek elementary school students of the 5th and the 6th grade have easy access to mass culture media, hence mass cultural texts become an integral part of their everyday literacy practices. In particular, texts combining language, still or moving images, music, etc. appear on top of their choices, thus engaging them in diverse activities. While watching TV, students choose entertaining rather than informative genres. The most common songs among students are performed by hip-hop, pop, rap, and rock artists, while they also watch videoclips online, whether music ones or others. They do not, however, read printed mass cultural texts very often, but, when they do, they usually opt for multimodal texts such as comic books or magazines. Although these findings are based on a limited sample of informants, they offer us a first glimpse on the students’ out-of-school mass cultural literacy practices. Needless to say, more research is required along these lines in order to cover a larger sample of students as well as elementary school students of different ages (i.e. 6-10 year-olds).

If we compare these findings to the genres already included in contemporary elementary school language textbooks (as presented in section 2), we could suggest that there seems to be what Luke (2004) calls a home-school mismatch: students’ out-of-school literacy practices are not compatible with the ones proposed, encouraged, and eventually imposed by language textbooks. Even though texts combining written discourse and still images tend to be more common in language teaching in class, they are not preferred to the same extent by students in their out-of-school literacy practices (see section 4). Hence, students’ mass cultural literacy practices could be exploited to develop new teaching material or to supplement already existing textbooks, so as to foster their involvement in language courses. Besides, the recent curriculum (Ministry of Education and Religious Affairs-Pedagogical Institute 2011), whose pilot implementation has already begun (during the academic years 2011-2012 and 2012-2013), encourages language teaching via the use of new technologies, which will provide both teachers and students with the opportunity to process and produce various texts. More specifically, this curriculum offers the possibility of replacing the texts included in the textbooks with different ones coming from TV shows, radio programs, webpages, films, magazines, etc., provided such texts are recently collected and reflect students’ interests. Consequently, teachers are expected to be familiar with students’ most common choices concerning mass cultural genres and related activities.

The new teaching material would no longer need to be in a printed format. Such a format precludes the exploitation of texts involving sound or moving images, which form a significant part of students’ everyday out-of-school activities. Instead, the teaching
material could be enriched with online and digital texts recorded on cds or accessed and/or downloaded from websites. Such genres combine moving images, sound, and oral discourse, that is, modes that prevail in students’ mass cultural literacy practices. The use of texts other than printed ones could enhance students’ experiences and skills related to processing multimodal genres.

Finally, according to the New London Group’s (1996) definition of the situated practice (see section 1), it is students who are expected to choose the teaching material and then bring it to class. Teachers’ involvement in the preparation of the teaching material is restricted to assisting students in preparing, implementing, and evaluating the learning process. Hence, teachers’ training on such a role is deemed necessary, since the need to cultivate students’ literacy skills becomes increasingly important.

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Media and literacy: Evidence from elementary school students’ literacy practices and the current teaching practices in Greece

Identity. University of Patras, Patras, Greece. [in Greek]


**Brief biographies**

**Anna Fterniati**
Ana Fterniati is Assistant Professor in Language Education at the Department of Elementary Education of the University of Patras in Greece. She has participated in various research projects and published papers and books in the field of language education and specifically in the field of literacy pedagogy and written discourse instruction, as well as in the field of multiliteracies. She also has experience and publications in curriculum design, development and assessment.

**Argiris Archakis**
Argiris Archakis is Associate Professor in Discourse Analysis and Sociolinguistics at the Department of Philology of the University of Patras in Greece, where he has been working since 1997. He has carried out research and published extensively on the analysis of various discourse genres, such as youth conversational narratives, classroom discourse, (adult) students’ literacy, parliamentary discourse, and media discourse.

**Villy Tsakona**
Villy Tsakona is Assistant Professor (ministerial approval pending) in Sociolinguistics and Discourse Analysis at the Department of Education Sciences in Pre-School Ages, Democritus University of Thrace, Greece. Her main research interests and publications involve the analysis of humorous genres, political discourse, and literacy education.

**Vasia Tsami**
Vasia Tsami is a Ph. D. student in Linguistics at the Department of Philology of the University of Patras in Greece. Her research focuses on mapping elementary school students’ literacy practices and their utilization for the design, development and assessment of teaching material.
PASOK’s education policy about the transferring of Greek students attending Foreign Universities (1982-1991): A Study Case – Florina’s Pedagogical Academy

Iliadou-Tachou Sofia
Associate Professor, University of Western Macedonia
siliadou@uowm.gr

Kalerante Evaggelia
Lecturer, University of Western Macedonia
ekalerante@uowm.gr

Tsigeni Paraskevi
Postgraduate Student, University of Western Macedonia
tsigenievi@yahoo.gr

Abstract
We review the legal stipulations over exam admissions of Greek Students attending foreign (especially Balkan) Pedagogical Academies to Greek ones, which reflect the Greek government’s political predilection to attract back Greek students, lending special interest in the related legislation, as well as the political intent underlying the particular legislation. The admission legislative rule is reviewed against the political environment that favors the authorization of Greek student transfers from abroad. Florina’s Pedagogical Academy, among others, has operated as a host institution and is our study case, which delves into the legislation enforcement and regulations of the admission system, highlighting testing and grading procedures, as well as broader deliberations within the academic community having to do with repatriated student placement. Florina’s Pedagogical Academy files provide information on entrance candidacies from foreign universities, especially Balkan ones.

Keywords: educational policy, tertiary education, transferred students, Balkan Universities

Introduction
The current study starts from the observation that a respectable number of elementary school teachers, who are officially appointed to the schools of Florina’s area, studied at the Balkan Pedagogical Academies. The policy of transferring Greek students from the neighbouring countries’ Academies had adopted by PASOK in 1983. Specifically, having won the elections of 1982, the Greek Socialist Party (PASOK) raised people’s expectations of a fundamental change.¹ Till then Greece was governed by conservative parties, so PASOK was the first party that used the title of the Socialist Government. It proclaimed a series of ideals concerning different concepts of the social classes, the dynamics of the political system, the principle of equality and the democratic functioning. Andreas Papandreou’s ideas about the reformation of political structures and the democratic operation of the system were closely linked with education; therefore the focus on educational design was a necessity for the re-distribution of educational rights to the

¹ q.v. For the political content of PASOK declarations, mainly during the first period 1981-1984 (Lyritzis, 1990; Spourdalakis, 1998).
lower social strata. PASOK’s education policy re-examined the structures and functionality of all levels of education and put into effect a collective assessment program which meant to replace the outdated forms of education with new ones. The socialist Ministers of National Education surrounded by experts elaborated innovative educational schemes, focusing on substantial alterations that would improve all levels of education. Their political discourse, regarding educational issues, concentrated on the nation State, stressing the idealism of a strong Greece and its relationship with the European Union. In the 80’s, it seems that the main goal of the government was to improve the tertiary education and formulate proper circumstances, where the cognitive level of the educator could be identified and controlled. Additionally, the researchers assume that PASOK’S interest in transferred students ensued from the government’s wish to prevent the inequality of degrees. As a result, the formation of many categories of teachers, who had been trained in foreign countries and had developed a different concept of educational status and culture, would be avoided.

The current study can be considered as a case study. The Pedagogical Academy of Florina was chosen as an example because it is near the Balkan countries and especially the former Yugoslavia. Thus a large number of Florina’s residents studied at Balkan Pedagogical Academies and benefited from the favorable provisions during the period 1982-87, especially concerning their transfer from the Balkan Academies to Florina’s Academy. As shown in the research, which is still in progress, from the serving teachers of elementary education in Florina a fairly significant percentage of them has achieved the first years of studies at the Balkan universities and completed them at the P.A. of Florina. Thus the research carried out in P.A. of Florina can be classified as a case study (Burns 2000).

1. The aims and objectives of the study

The existing literature about this study is limited. Only Christos Antoniou (1990, 2002: 224-226) in his thesis about the pedagogical Academy of Florina has discussed the issue of the Greek transferred students to the Academy, but without considering this matter as crucial in his research. Our study focuses for the first time in Greek transferred students to Florina’s Pedagogical Academy and aims at: a) the description of the objectives of PASOK’s education policy during 1982-1987 concerning the Greek transferred students from the Balkan Pedagogical Academies to Greek ones, b) the observation of how these objectives were implemented in the case of Florina’s Pedagogical Academy c) the interpretation of the main reasons PASOK’s government carried out this legislation framework.

2. Methodology

In our opinion, the methodology of this study responds to the objectives outlined above. Particularly, we use the historical interpretive method for a) the description of the

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2 q.v. An outlook for the early association between Greece and Europe on knowledge and forms of education (Pasias 2006).

3 Oral reports from the Directors of Education.
legislation and the corresponding context pertinent to the issue of the Greek students who were studying abroad and b) the case study and the implementation of the above legislative framework on Florina’s Pedagogical Academy. We studied for our research the archives of Florina's Pedagogical Academy and specifically the General Assemblies' minutes, dated from 1982 to 1991.

3. PASOK’s legislative framework about the transferred students from foreign Pedagogical Academies

The task of PASOK’s Government began with the fundamental Law 1268/1982 which regulated the structure and function of the Greek Higher Educational Institutions. The article 46 established the Pedagogical Departments of Elementary Education and Schools of Early Childhood Education in Athens, Thessaloniki, Patra, Thrace and Crete. These Departments had duration «at least 8 semesters». Also this article outlined the Government’s intention to improve the teachers’ training and transfer the Greek students or graduates from abroad to corresponding Greek faculties. The law stipulated that each university would classify on its own decision students or graduates so that they would attend courses, which had not been taught in the school of origin.

The Government was so interested in the issue of transferring that two months after the voting of the L.1268 / 82 it passed a new complementary L.1286 /1982, focusing on the:

- Determination rates for transfers.
- Reference to a special established order regarding admissions and transfers.
- Setting for the examination courses.

The government probably intended to reduce the admissions of high school graduates by regulating the issue of transfers. Besides it was estimated that by the end of 1989, the number of students who would be attending foreign Pedagogical Universities would be limited. The second issue which the law regulated was the special category of transferred students. Specifically the L. 1286/1982 stated that a 2% of students who had a parent, brother or spouse studying in the host university and a percentage of 4% when the candidate, at the discretion of the host university, claimed special reasons, such as a serious risk or threat of life or health as well as social, economic and family reasons, had the right to transfer to corresponding universities. Additionally, candidates, eligible for transferring, had to be examined in three compulsory courses of the previous academic year or semester from the one they wished to be transferred. With the Ministerial Decision (M.D.) C3/831/25-12-1982 particular issues for transfers were regulated that

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4 The law provided that the foreign Universities were to be determined by a Presidential Decree, which fell under the previous paragraph.
5 For the Higher Educational Institutions in all years except the first and the last one in percentage: a) 15% for the 2nd year and 10% for each year during the academic year 1983-1984, b) 10% for 3rd and 5% for each year during the academic year 1984-1985 and c) 5% for the 4th and each year during the academic year 1985-1986. In the higher faculties the students enroll in the 2nd year of study at a rate of: a) 15% in the academic year 1983-84, b) 10% of the academic year 1984-85 et seq. (article 4, par. 1).
6 cf. Generally the law on foreign and domestic transfers provides that specific provisions, such as the ones in article 2, par. 4B, offer the transfer right, when for the candidate occur “special reasons” at the discretion of the host university or academy. [...] Also in article 2, par. 6B 5% for each host university to those who have a parent, a brother or a husband and they are students in the host universities [...] and respectively in article 2, par. 6C «4% for each host university for those who claim [...] specific reasons [...]». 
actually amplify the points of the L. 1286/82. Specifically, the M.D. determined the courses for the admission examinations to Pedagogical Academies for both academic years, that is, a composition essay and Greek history for the 1st year and general pedagogy and developing psychology for the 2nd year. The following year the M.D. C3/1214/17-6-1983 added to the exam regulations for the 1st year candidacies the composition essay and either the course of the Greek history or maths or physics.

Later on the M.D. C3/106/14-2-1986 established the Equivalence & Accreditation Committee for Training Teaching Personnel (EACTTP), which was responsible for the inspection of degrees, acquired from foreign Pedagogical institutions. In 1987 the Equivalence Committee for the elementary education, comprised by experts in education policy, was constituted according to the M.D. C3/1513/15-12-1987. At the same time the M.D. C3/1368/2-12-1986 recognized concrete universities as equivalent, so that the candidates would not have to submit a specific certificate. According to Hellenic NARIC (National Academic Recognition and Information Center) there was a number of recognized foreign academies and universities. Until 1986 the regulations focused on procedural matters and especially on the suitable courses for the admission exams for both transferred graduates and undergraduates from abroad.

Since 1986 the educational policy makers dealt with the issue of how they could control the process of studying in foreign universities and examine the degrees of Greek graduates from foreign Pedagogical Universities. Establishing an Equivalence Committee means that there is a legitimate body responsible for reviewing foreign degrees and essentially deciding on the appropriateness or not of graduates from foreign institutions. An interesting issue is that the Hellenic Ministry of Education staffs the Committee with experts from Pedagogical Universities and with representatives of the elementary and secondary teachers' Union. Gradually the favorable arrangements made as a welfare policy are abolished, especially the ordinance regarding transfers due to social issues. So a policy of transparency is adopted with clear knowledge of the transfer criteria based solely on the candidates' assessment in certain courses.

After the determination of the recognized universities the Equivalence Committee was delegated to refer graduates to supplementary examination (circular C3/1556/2-12-1986).

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7 Schools of Training Teaching Personnel are: Pedagogical Academy, Schools of Early Childhood Education, the Higher Home Economics and the Departments of Elementary Education.
8 A corresponding Committee was established for the secondary education as well.
9 q.v. With the C3/127/20-6-1986 special transfer regulation from Italian “Facoltas di Magistero” to Pedagogical Academies/Faculties and Schools of Early Childhood Education.

- Pedagogical Academy of Belgrade,
- P.A. Dusan Jerkovic in Sabac, Yugoslavia,
- P.A. Skenderbeu in Gnjilane, Yugoslavia,
- P.A. Ivo Andric in Vranje, Yugoslavia,
- P.A. Svetozarevo, Yugoslavia,
- P.A. Belgrade, School of Early Childhood Education,
- P.A. Vranje, School of Early Childhood Education,
- P.A. Gnjilane, School of Early Childhood Education,
- University of Lutz, School of Early Childhood Education,
- Higher Faculty of Education, Stockholm (Institute of Solna),
- Kalmar University of Sweden- School of Early Childhood Education.
The issue of transferred students or graduates from abroad came to an end by the Presidential Decree (P.D.) 269/27-7-1987, which stated explicitly that «transfers from abroad are permitted for the last time in the year 1987-88. From the academic year 1988-89 no transfer or admission is granted».10

Basically the discontinuance of Pedagogical Academies is associated with the reduction of the phenomenon of transfers; even if it was not determined with the P.D. 269/27-7-1987 the abolition of transfers from foreign universities. Pedagogical Academies operated according to different criteria, but the circumstances which arose in the professional area, especially after the alteration of the appointment system for teachers, which was through State exams determined by the Supreme Council for Personnel Selection (ASEP), new conditions had been created which discouraged prospective Greek students to study at universities abroad.

4. A case study: PASOK’s education policy (L.1286/82) implemented in Florina’s Pedagogical Academy

Firstly, it should be clarified that the duration of studies in Greek Pedagogical Academies were two years. Florina’s Academy implemented certain provisions of the L. 1286/82 already from the academic year 1982-83, while the following years it applied the decisions and circulars on transfers and admission exams by the book. According to the archives of Florina’ P.A. and the references made in them concerning the universities of origin, the highest percentage of transferred students was from the former Yugoslavia, while a small percentage was from other countries such as Italy (University of Bologna, Padua) and Bulgaria (Sofia University). In this study it is taken into account that the majority of Greek students were transferred from Yugoslavian Pedagogical Academies.

Florina’s Academy accepted for the last time freshmen in 1986-1987 due to its cessation in 1989-1990 (P.D. 286/1986), while October 30, 1989 and November 10, 1989 were the last days the Academy provided degrees to its graduates.11 Thus the transfers in the 2nd year were conducted for the last time in 1987-1988 (P.D. 269/1987). The main subject of the Academy’s general meetings, from 1982 to 1987 was the new legislation, especially that of transfers and admissions from foreign Pedagogical Universities. Particularly it was given emphasis on how the Academy would implement the L.1286/82 and the following Presidential Decrees. The decisions were about:

a) The percentage of the admitted students with exams, graduates of domestic or foreign Higher Institutions in the 1st year and graduates of universities in the 2nd year. This regulation did not refer to students or graduates from Pedagogical Universities (L.1286/82; M.D. C3/831/25-12-82).12

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10 cf. On the same issue in the P.D. 527/20-10-1988 it is cited the cessation of Pedagogical Academies and noted that all students of P.A. and Schools of Early Childhood Education should have received a Bachelor's degree till 10-11-1989, otherwise they will lose their student’s rights.

11 The operation of the Academy prolonged till 30/6/1991 (P.D. 24/1991). There was no change in transfers’ regulations.

12 Examination courses for admissions:
1st year: a)Composition essay
   b)History: i)Roman & Byzantine, ii) Modern Greek and European
2nd year: a)Pedagogy
   b)Psychology (M.D. C3/831/25-12-82)
b) The transferred students from foreign Pedagogical Universities with or without exams throughout each current year at the discretion of the Academy. The measure started in 1982-83. The Academy accepted transferred students who invoked reasons of health or were members of large families or were mothers of underage children (without quantitative restrictions). Moreover, those who had a brother or spouse already studying in the Academy (at a rate of 2%) and those who claimed special reasons (at a rate of 4%) (L.1286/82, art. 4). They were accepted by submitting the necessary documents and provided that they had succeeded in the 1st year courses of their university of origin.

**Figure 1**

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<th>Frequency of transferred students per category</th>
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**Academic Year**

13 Main supplementary courses to be examined: Greek language-grammar, Greek History, Religion, Teaching Methodology, Pedagogy, Psychology, Physics, P.E., Sociology, Philosophy.

c) Those who came from foreign Pedagogical Universities and did not claim specific reasons enrolled at a rate of 15% in 1983-84 and 10% from 1984-85 and forth in the 2nd academic year after having been examined on three courses from the 1st academic year. That is Pedagogy, Psychology and Greek language-grammar (P.D. C3/831/25-12-82). Until the academic year 1985-86, transferred students in the 2nd year were exempted from the 1st year courses, on condition these courses were taught sufficiently at the university of origin. At the discretion of the Academy, transferred students were examined to those courses necessary for their training (P.D. C3/1214/17-6-83). The records do not give more details on this topic until the academic year 1986-87, when the Academy defined the courses the 2nd year transferred students had to be examined considering the university of origin.13
d) Graduates from foreign Pedagogical Universities who required degree recognition. Their applications were studied by the Equivalence & Accreditation Committee for Training Teaching Personnel (EACTTP) which in turn determined the respective Greek courses the graduates were to be examined. This procedure ended on August 31, 1991. The graduates had the right to attend the set courses and were examined during the examination periods of the Academy, at the same time and with the same syllabus of the regular students (P.D. C3/106/14-2-86; Circular C3/1556/2-12-86, par. 4). The archives show the full compliance of the Academy to the guidelines given by the Ministry of Education. The data analysis shows that Florina’s Academy received a large number of graduates and students mainly from the former Yugoslavia.

5. Archives Analysis

The data, collected from the minutes of the general assemblies and the council of administration of the Academy, were processed and analyzed with the statistical program SPSS. According to the findings:

a) The application of the L.1286/82 basically starts in 1983-84, when it is made known the right to be transferred from foreign universities because of financial, social and family reasons. Figure 1 depicts the frequency of the total number of students who were transferred to Florina’s Academy in the 1st and 2nd academic year from 1983 to 1987. There are three categories of transferred students: A=transferred students to the 1st year without admission exams, B=transferred students to the 2nd year without admission exams and C=students who were transferred to the 2nd year at a specific rate with exams. The most impressive finding here is the massive increase in transfers to the 2nd year without admission exams, the last two academic years 1986 and 1987.
Since 1985 the number of transferred students from the B category increased about eight times within two years. Certainly, it cannot be overlooked that there was a limit of 10% of the total admissions for those who sat for examinations (category C), but the last academic years the 10% wasn’t reached. However, most students chose to enroll in the Academy claiming special reasons. It appears that the aim was to strengthen the social educational policy and improve the living conditions of the lower social classes.

Figure 3 illustrates the proportion between the State exams students (A) who admitted Florina’s Academy and the total number of transferred students from Balkan Pedagogical Universities (B) during 1982-1987. Comparing the two categories, the number of transferred students is considerably growing from 1985 and forth, while there is a small increase of State exams students in 1984 and 1985. Apparently, Greek students intended to be transferred to Greece and continue their studies in order to have good prospects for rapid vocational rehabilitation. Domestic transfers and athletes have been excluded. In 1987 the P.A. did not accept new admissions due to its impending cessation.

Candidates who wished to be transferred to the 2nd year and could not meet the specific requirements of the legislation had to be examined in the three subjects, mentioned previously, achieve in all three of them and finally be selected at a rate of 10% (M.D. C3/831/25-12-82). It is remarkable that while the applications in 1984-85 amounted at 13, the number is almost multiplied nine times in 1985-86 reaching 100 requests. The last two years, applicants amounted to 229 and 266. These numbers show the intense mobility from foreign universities to the Greek corresponding ones, as well as the popularity of the law. Consequently, many young Greeks rushed to
benefit from it. Eventually a smaller number sat for exams and only those who finally enrolled managed to pass all courses (Figure 3).

b) The statistical comparison between the legitimate special cases of transfers to the 1st or 2nd year of Greek Pedagogical academies without examination reflects the great interest of the society as a whole. The letters in Figure 4 represent the four categories of special cases the students invoked: A=Special reasons, B=Severe diseases, C= Members of a large family/Mothers with underage children and D= Brother/spouse that studies in the same school.

Figure 4

84% of transferred students to Florina’s Academy were members of large families and mothers with underage children (C), which is a quite impressive percentage. The number of transfers because their brother or spouse studied in the Academy (D), due to the limit of 2%, remains small compared with the other categories (L. 1286/82, art. 2, par. 7). Only 6% of the students invoked special reasons (A), which were not specified in the Academy’s archives and 1% claimed they suffered from a severe disease (B). In conclusion, members of large families and mothers with underage children (C) rushed to take advantage of the welfare measure and the vocational rehabilitation ensued from it before the cessation of the Academy (Figure 4).

c) As far as the Greek graduates from foreign Pedagogical Universities who requested recognition of their degree, 598 graduates participated in the Academy’s examination periods, starting from 1986. They had to achieve the defined courses before the cessation of the Academy, otherwise their degree would be considered invalid. In this case the mass arrival from specific cities of the former Yugoslavia is observed the last two years (1988 and 1989) before the expiration of the measure. So the 36% of graduates came from Vranja, followed by Belgrade with 33% and Gnjilane with 11%. Additionally, 8% came from Svetozarevo, 7% from Pristina and 5% from Sabac. Possibly
the Greeks chose universities recognized by the circular C3/1368/2-12-86, for their degree recognition to avoid bureaucracy. There is a negligible percentage of graduates who attended smaller Yugoslavian universities, such as Krusevac, Mitrovica, Aleksinac, Pirot, which is not taken into account (Figure 5).

Figure 5

Graduates from Balkan countries requesting degree recognition

6. Discussion-Conclusion

Shortly after the release of the L. 1286/82, the movement of Greek students from Balkan countries began. At the discretion of the Academy they were enrolled in the 1\textsuperscript{st} or 2\textsuperscript{nd} academic year according to the University of Origin. The advent of transferred students culminated in 1987-88, which was the last year of transfers and application of the law. There were mainly three categories of students who were transferred to Florina’s Pedagogical Academy: a) students who invoked reasons of health or were members of large families or were mothers of underage children (without quantitative restrictions), b) students who came from foreign Pedagogical Universities and enrolled at a rate of 15% in 1983-84 and 10% from 1984-85 and forth in the 2\textsuperscript{nd} academic year after having been examined on three courses from the 1\textsuperscript{st} academic year and c) graduates from foreign Pedagogical Universities who required degree recognition. However, most students chose to be transferred to the 2\textsuperscript{nd} year of the Academy without admission exams instead of undergoing the compulsory examination courses, which may or may not ensure a position in the Academy. It was a popular way of being transferred that was massively increased in the last two academic years (1986-1987). So a limited number of students made use of the examination measure in comparison to those who claimed special reasons.\footnote{Issue which is under investigation.}
Our findings speak for themselves. 84% of transferred students were members of large families and mothers with underage children, who admitted to Florina's Academy without being examined to any course. A this point, one specific question that arises is if being a member of a large family was a defining characteristic of the area that represented a large percentage of the population or if it was "manufactured" in order to be benefited from the existent provisions of the Law.

It is of great interest the over-concentration of Greek students in specific Yugoslavian cities as the 36% of graduates came from Vranja, followed by Belgrade with 33% and Gnjilane with 11%. Additionally, 8% came from Svetozarevo, 7% from Pristina and 5% from Sabac.

The main reasons of PASOK's decision to put into effect the policy of transfers from the Balkan countries were ethnical, pedagogical, social, and regional ones (concerning the ethnic conflicts in the former Yugoslavia):

a) The ethnical reasons were associated with the process of socialization that involves the acquisition of Greek consciousness. The issue of disparate education for the Greek teachers who studied in the Balkan universities was resolved with transfers under one crucial condition: that is, apart from the pedagogical courses, all transferred students from abroad had to be examined in Greek language, history and religion. It is a choice that establishes the national identity in the context of the nation-State. Given that the Greek students of Balkan countries were mediocre, the emphasis on Greek language was deemed necessary. It is noted that from the 11 recognized foreign universities 9 of them are in Yugoslavia. It seems the legislator wished to solve the problem that existed with the large advent of elementary teachers coming from Yugoslavian universities. On the whole, a valuation of the period 1986-87 pinpoints the fact that the State's education policy worries about the Greek graduates from Yugoslavian universities and probably wanted to reduce that number by discouraging Greek candidates to enroll in them.

b) The pedagogical reasons were associated with the establishment of pedagogical departments and served the goal of achieving a generally homogeneous education for elementary teachers. Also the question of transfer regulations seemed to be included in the unified framework of legislation for the teachers' training at the Higher Institutions of Education.

c) The social reasons were connected with the demand of social mobility and social justice in the border area of Florina, with its specific characteristics. Social mobility has been one of the main purposes of Socialist parties in Europe (Kraaykamp 2000, McIntoch & Munk 2007, Rakic 2001, Breen 2004). They believed that by creating the proper conditions, social mobility would contribute to the building of an open society of equal opportunities for all social groups or classes and the reduction of social inequalities (Duru-Bellat & Kieffer 2008, David et. al. 2010, Manski 1992). In other words, their goal was to achieve social justice (Gewirtz 1998, Bankston 2010). PASOK's ideological platform was based on that aspiration. As a new political party, PASOK wished to shape those particular conditions which would give equal opportunities, especially as far as education was concerned, to Greeks from all walks of life. It was believed that education was the only objective mechanism which would ensure the social mobility and society’s reformation (Jackson et. al. 2005, Beller & Hout 2006, Leventoglu 2005).

The social mobility in Macedonia region has various dimensions, as it is closely connected
with distinctive problems of the region itself. After the inclusion of Macedonia in the Greek State, education became a national issue that had to be resolved. The inhabitants of the area were bilingual who, according to the State’s policy, had to be integrated into the Greek population. So they had to be educated exclusively in Greek. During consensus periods, the State had a mediating role between local ethnic groups living in the Macedonian territory, where Florina belongs to, as well. In this context, teachers’ education in Pedagogical Academies, like Florina’s, functioned effectively as an allocating mechanism of social roles, capital and goods. In other words, it functioned as a mechanism of social reproduction through the relationship between State, society and education (Hliadou 2007). Therefore, through the process of national and linguistic homogenization, Pedagogical Academies ensured the access to education and social mobility for all walks of life. However, the borderland of Florina was facing, even much later in 1983-87, many social and economic problems. The weaker social classes, who most of them were PASOK’s voters, had few opportunities for social and vocational advancement.

Overall, it was attempted a downgrade of the social criteria: instead of creating the proper conditions so that the lower social strata became competitive in an open society, PASOK’s government, claiming the goal of social justice, introduced the legislation about transfers, facilitating their admission to Greek Pedagogical Academies. Our research showed that most Florina’s transferred students or graduates from Balkan Pedagogical Universities came from lower social strata. According to Antoniou (1990) their social origin, based on their father’s occupation, was farming and stock breeding. So the law gave them the opportunity for social advancement and progress.

Consequently, those favourably educational choices initiated a controversy regarding the expediency of the measure and if they really served the intended educational purposes. Especially with the suggested social criteria, the particular education policy seemed not to take into account the cognitive evaluation of candidates, that is, their qualifications. On the contrary, it was given greater importance to the candidates’ social conditions, which they probably expressed a welfare policy, but they actually created different criteria for evaluating candidates.

d) The reasons regarding the broad region of Macedonia could be associated with the rise of Albanian nationalism in the area which may have affected the structures of the Balkan Pedagogical Academies so that foreign students had an easy access to them. A factor that may have been appealing to the Greek students. Although it must be underlined that the special features of the former Yugoslavian Academies and the Greek students’ choices remain at present issues under research.

Lastly, one main subject of this investigation is the determination of the exact percentage of transferred students integrated in the educational mechanism of Florina’s area in recent years and the potential existence of assumptions about the consequences of the Law in the local area/community.

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Legislation


Greece. Parliament. M.D. C3/1368/2-12-86, «Recognition of foreign universities as equivalent to Pedagogical Academies and Schools of Early Childhood Education ».


Hliadou Sofia
She studied Greek Literature at the Philosophical Faculty of the Aristotle University of Thessaloniki and did postgraduate studies in Modern History, in Pedagogy and in Byzantine History. In 1996 she got a PhD from the Department of Early Childhood Education at the Aristotle University of Thessaloniki and in 2002 she was elected lecturer of history of Modern Education in the Department of Elementary Education of the University of Western Macedonia. Today she is an
Associate Professor and member of the Directorate Council of the Hellenic Society for the history of education and the International Association of historians of education. She has written numerous articles in many scientific journals and important scientific books.

**Kalerante Evaggelia**
Since 2010 she has been working as a lecturer in the Department of Early Childhood Education at the University of Western Macedonia. She is a graduate of the Department of Political Science and Public Administration, School of Law, Athens University (1989), where she got her PhD (2005). She did postgraduate studies in Sociology and Politics at the University of Athens (2000). She has numerous and important scientific writings to display.

**Tsigeni Paraskevi**
Currently she is a postgraduate student in the Pedagogical Department of Elementary Education of the University of Western Macedonia. She studies Modern Greek history and Greek educational policy. In July of 2011 she graduated from the same department and university with honors. She speaks English fluently (Proficiency of Cambridge & Michigan) and the last 8 years she has been working in a private English school as an English teacher. During her undergraduate studies, she participated in educational concepts with the aim of further training.
Prospective elementary teachers’ knowledge in computational estimation

Charalambos Lemonidis
Professor of mathematics education
Primary Education Department
University of Western Macedonia
xlemon@uowm.gr

Anastasia Kaimakami
Student
Primary Education Department
University of Western Macedonia
kaimakami.anastasia@hotmail.com

Abstract
Except for their wide applications in everyday life, computational estimations help students to acquire the number sense and deeper understanding of the arithmetic operations. In the present research we examined, the abilities of 50 Greek pre-service elementary teachers in computational estimation, through personal interviews. It was indicated that a large percentage of these teachers do not know how to use computational estimation and resort to exact calculation and in particular, they use written algorithms. In addition, pre-service teachers do not know how to use the strategies of averaging and compatible numbers. These pre-service teachers seem to have a limited ability to number sense, namely in mental calculations and flexibility of strategy use.

Keywords: computational estimation, pre-service teachers, Greece

1. Introduction
Estimating the right answer is a necessary skill in modern society, as people nowadays, are often required to take decisions in a short time and to decide for the correctness of the actions taken with the help of technological means. That is, they have to be able to judge the answer from a calculator or an electronic computer, as it is very easy to come to the wrong conclusion by pressing the wrong key. In addition, it is essential for someone to be able to do quick calculations, without the use of paper and pencil, or a calculator, in order to answer questions in relation to time, capacity or quantity, (e.g. money transactions).

In everyday life, computational estimation is used more than any other kind of computation. Northcote and McIntosh (1999), examined the computation method used by adults during a typical 24 hour period. They found that 84.6% of the computations were performed mentally, 11% were in writing, and 6.8% were carried out with the help of a calculator. 60% of all computations were by estimation, and 40% were exact computations. Regarding the object of computations performed in everyday life, it was found that most of the computations concerned time (24.9%), with the second most frequent computations concerning shopping (22.9%).

Estimation is recognized as an important mathematical subject and is stressed in programs of many countries such as England, the United States of America, and Japan among others. The importance of developing the ability of students in estimation is recognized in Principals and Standards for School Mathematics (NCTM, 2000) in the
United States,. In Greece, estimation studies appeared in 2003 in the Cross-Curricular Thematic Framework curriculum (Δ.Ε.Π.Π.Σ. – Α.Π.Σ., 2003) and in 2006 the new edition of school books introduced it in the classroom.

In everyday life we can find four different kinds of estimation which are: the computational estimation, the estimating measures, the estimating numerosity and the number line estimation. The most used kind of estimation is the computational estimation. It is believed that computational estimation is a number sense component (Greeno, 1991, McIntosh, 2004).

According to Dowker (1992), the definition of computational estimation involves *doing logical supposition in order to find an approachable answer in arithmetic problems, without doing the exact calculation before*. The main purpose of the present research was to study the knowledge and the ability of prospective Greek teachers of primary education, in relation to computational estimation.

### 1.1. The strategies in computational estimation

The strategies in computational estimation were researched in adults with computational abilities of various levels, (Dowker, 1992; Dowker, et al., 1996), in children and teenagers (Levine, 1982, Baroody, 1989; Sowder and Wheeler 1989; Reys et al., 1991a; Dowker, 1997, Lemaire, et al. 2000), and in samples of different age groups (LeFevre et al., 1993; Lemaire, & Lecacheur, 2002).

In most of these studies, computational estimation was researched by asking the subjects to give estimations or approximate solutions to numerical problems (e.g. 246 + 468 =700). These studies were carried out by measuring the accuracy of the approximation (by recording the absolute or the relative difference between estimated and correct answers), by oral protocols (i.e. asking the subjects to mention how they found the solution), and in some cases the time taken in producing the answer, was recorded.

The results of these studies show that from the early stages of the development of computational estimation, children use a range of strategies. Often, these strategies are not used alone but they can be combined, for example when a student solves a problem he can use rounding on one or on both parameters and then use compensation to reduce the deviation resulting from rounding.

The strategies in computational estimation can be classified according to different levels of generalization. In a general level, children and adults have been found to use the following three groups of strategies: reformulation, compensation and translation (Reys et al., 1982; Reys et al., 1991b; Sowder & Wheeler, 1989). Sowder and Wheeler (1989), include the following four strategies in the group of strategic reformulation: a) rounding, b) truncating, c) averaging and d) number format changing. Lemonidis (2013), reviewing relative literature (Reys et al., 1982; Sowder & Wheeler, 1989; Reys et al., 1991b; Dowker, 1992; LeFevre et al., 1993), presents a list of 12 strategies on computational estimation: 1) rounding, 2) front – end strategy, 3) truncating, 4) clustering or averaging, 5) prior compensation, 6) post compensation, 7) compatible numbers strategy, 8) special numbers strategy, 9) change number format, 10) factorization, 11) distributivity and 12) algorithm. These strategies often depend on the operation involved in the estimation. Also, in some cases the names of the strategies provided by different authors vary.
In our study, we set problems on computational estimation, which could be answered using various strategies, but the problems were set in such a way so that a solution could be found using one of the following five strategies: front – end strategy, clustering or averaging, rounding, compatible numbers strategy and special numbers strategy.

2. Background

Several researches have been conducted with students at the elementary and secondary school levels and all came to the conclusion that computational estimation is very difficult and that students feel uncomfortable with the estimation process (Reys, et al., 1991a; Reys et al., 1991b; Sowder & Wheeler, 1989; Threadgill-Sowder, 1984). Levine (1982) investigated computational estimation strategies of college students. She concluded that even college students found computational estimation to be quite difficult. The strategy types Rounding Both Numbers and Proceeding Algorithmically were used significantly more frequently than others. Proceeding Algorithmically is the strategy type most like actual computation. Its popularity may be a reflection of students' dependence on the well-defined algorithms of exact pencil and paper calculations and their relative unfamiliarity with estimation.

There are few studies examining the knowledge of teachers and pre-service teachers in relation to computational estimation (Alajmi, 2009; Goodman, 1991; Smith, 1993; Trafton, 1994; Yoshikawa, 1994).

Goodman (1991) studied the competence on computational estimation of 46 pre-service teachers of primary education, using a test devised by himself. In his study, the response of the prospective teachers to the aspect of the problem as well as to the number format were examined. The results of his study showed that:

- Estimation with fractions was more difficult than estimation with whole numbers, decimals, or percent.
- Performance was better on items presented in story problem form than on items presented in numerical form.
- Open-ended estimation and estimation with an order of magnitude (e.g. type of answer: a) 30, b) 300, c) 3000, d) none of the previous) were both more difficult than estimation relative to a reference number.
- There were significant interactions for ability versus problem type and ability versus number type.

Smith (1993) evaluated the understanding of the meaning of computational estimation strategies by prospective teachers of primary education. The researcher developed a tool of computational estimation consisting of 16 descriptive problems (8 addition problems and 8 subtraction problems) and she determined which specific strategies had been used by engaging in a dialogue with the teachers. Results showed that for both operations, older prospective teachers with experience did not have a better understanding of the meaning of estimation strategies than younger prospective teachers did. It also became evident from the dialogues with the teachers that rounding was the only strategy which a lot of primary education teachers referred to it by its name.

Trafton (1994) suggested that the views of American teachers for estimation “are similar to those of students”; they restrict estimation techniques in rounding of multiples of 10.

Yoshikawa (1994) indicated that Japanese teachers were probably avoiding teaching the
computational estimation fearing that this would deter students from developing the ability to calculate the precise answer with the help of paper and pencil. Moreover, some Japanese teachers did not like the vagueness in estimation problems. They teach rounding techniques as this is considered as safe and simple.

Alajmi (2009) interviewed 59 mathematics teachers from primary and secondary education in Kuwait in order to investigate their understanding of the importance of computational estimation, and their opinion on the importance of computational estimation in study programs. Results of the study showed that 60% of the teachers identified the computational estimation with rounding. While two thirds of the teachers considered the computational estimation to be a significant competence in everyday life, only a fifth (20%) of them see it as important in mathematics education. More than half of the teachers either disagreed with the idea of teaching computational estimation, or wanted to teach it in only limited situations. Most of them were worried about the difficulty of learning the computational estimation or were afraid that teaching of computational estimation would cause problems to the students in relation to developing algorithms for producing an accurate answer.

The results of the above studies show that in order to introduce the computational estimation in study programs, it is necessary for teachers to understand the meaning and value of computational estimation in education.

Hanson and Hogan (2000) examined the computational estimation skill of 77 college students and found that although students estimated correctly answers to most problems on addition and subtraction of whole numbers, they performed poorly on multiplication and division of decimals and subtraction of fractions. A result of this research is students’ strong aversion to estimating. Reys et al. (1991a) and Reys et al. (1991b) also found that many students in both Japan and Mexico were more comfortable solving computational problems exactly than estimating solutions. These researchers indicated that students resisted giving estimates because they either did not understand the meaning of estimation or were reluctant to accept error. In the study of Hanson and Hogan (2000), students who were reluctant to estimate, either appeared confused about why anyone would want an estimate instead of an exact answer or simply wanted to show that they knew how to solve the problem exactly.

Yang et al., (2009) examined number sense strategies and misconceptions of 280 Taiwanese pre-service elementary teachers who responded to a series of real-life problems. The test instrument contained 12 items designed to investigate two components of number sense, namely using benchmarks and estimation in recognizing the relative effect of different operations on the magnitude of numbers. About one-fifth of the pre-service teachers applied number sense-based strategies (such as using benchmarks appropriately or recognizing the number magnitude) while a majority of pre-service teachers relied on rule-based methods. This study documents that the performance of pre-service elementary teachers on number sense is low.

### 3. Aims of the study

The present research examined the ability of the graduate students of the Pedagogical Department of Primary Education in Florina to solve problems of computational estimation. In particular, the objectives of the research were to identify the following:
1. How familiar are graduate pre-service teachers with computational estimation and how do they solve problems of computational estimation?
2. Which parameters affect the difficulty in a problem of computational estimation?
3. Which difficulties do they face and what errors do they make in solving problems of computational estimation?
4. Do they know how to properly employ the strategies of computational estimation?
5. What are the number sense abilities of these pre-service elementary teachers?

4. Method

Participants
In this research 50 students were tested, pre-service teachers, of the University of Western Macedonia. The students were in the final year of their four-year studies. The sample consisted of 9 male (18%) and 41 female (82%) students.

Instrument
The research tool employed was the interview. Firstly, the students’ demographic data were recorded and then the meaning of computational estimation was explained to them. Following that, it was mentioned that a timer would be used and timing would begin from the moment they had read the question. There was no reason for pressure as there was no time limit for the answer. The students read the question either on their own or it was read to them by the researcher. After producing an answer, they were asked to indicate the way by which they came to the result (“what were the thoughts that have led you to this result?”). The time taken to answer each question was recorded with the timer.

The problems
The following 15 problems were posed during the test. Some of these problems were word problems, and some were simple operations without words.
1. Give an approximate estimation of the sum of the following amounts of money:

2. € 4.79, € 0.99, € 1.37, € 2.58

3. Give an approximate estimation of the number of visitors in an exhibition from the following list: Monday 72.250, Tuesday 63.819, Wednesday 67.480, Thursday 73.180, Friday 74.918, Saturday 68.490.

4. A student started skiing lessons and completed 75 hours and the cost of each hour is 36€. How much does he have to pay?

5. Give an approximate answer to the following:

6. 3.388:7=

7. Give an approximate answer to the following:

8. 7/8 + 12/13 + 23/45 =

9. In 816 ml of a substance 9.84% is alcohol. How much alcohol is approximately in the substance?

10. Give an approximate number of students in all three schools


12. Give an approximate answer to the following:

13. 437 x 8 =
14. Six independent measurements were made by a team in order to find the height of Mt Everest: 28.990 ft, 28.991 ft, 28.994 ft, 28.998 ft, 29.001 ft, and 29.026 ft.

15. Based on these measurements what is the approximate height of Mt Everest?

16. Mary runs 1/2 km in the morning and 3/8 in the afternoon. Did she run at least 1 km?

17. Is the following result approximately 200?

18. 35 + 42 + 40 + 38 + 44

19. Give an approximate answer to the following:

20. 62x79=

21. A worker worked 28 days for 56 € a day. How much will he be approximately paid?

22. Six student groups prepared flower bouquets for the school celebration. Each team prepared 27, 49, 38, 65, 56, 81 flower bouquets. How many flower bouquets are there approximately?

23. A train of modern technology covers 25.889 kilometers in 52 hours. How many kilometers does the train cover approximately in one hour?

5. Results

5.1. Factors influencing the difficulty in problems of computational estimation

In this section the performance of the pre-service teachers to the 15 problems is presented. On the basis of this performance, the parameters which make a computation estimation problem easy or difficult to solve are determined. In table 1, the percentage of correct answers is presented in the first row independently of the method of calculation. In the second row, the percentages of correct answers by estimation are presented. In the third row the average response time for the correct answer, independently of the method of computation is presented.

Table 1: Percentages of success, use of estimation, and response time per question

<table>
<thead>
<tr>
<th>Questions</th>
<th>Q.1</th>
<th>Q.2</th>
<th>Q.3</th>
<th>Q.4</th>
<th>Q.5</th>
<th>Q.6</th>
<th>Q.7</th>
<th>Q.8</th>
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<tbody>
<tr>
<td>Success</td>
<td>43</td>
<td>28</td>
<td>15</td>
<td>34</td>
<td>29</td>
<td>30</td>
<td>48</td>
<td>41</td>
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<tr>
<td>(86%)</td>
<td>(56%)</td>
<td>(30%)</td>
<td>(68%)</td>
<td>(58%)</td>
<td>(60%)</td>
<td>(96%)</td>
<td>(82%)</td>
<td></td>
</tr>
<tr>
<td>Use of estimation</td>
<td>40</td>
<td>27</td>
<td>10</td>
<td>19</td>
<td>25</td>
<td>30</td>
<td>41</td>
<td>27</td>
</tr>
<tr>
<td>(80%)</td>
<td>(54%)</td>
<td>(20%)</td>
<td>(38%)</td>
<td>(50%)</td>
<td>(60%)</td>
<td>(82%)</td>
<td>(54%)</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>22 sec</td>
<td>56 sec</td>
<td>43 sec</td>
<td>36 sec</td>
<td>40 sec</td>
<td>35 sec</td>
<td>22 sec</td>
<td>31 sec</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Questions</th>
<th>Q.9</th>
<th>Q.10</th>
<th>Q.11</th>
<th>Q.12</th>
<th>Q.13</th>
<th>Q.14</th>
<th>Q.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>40</td>
<td>49</td>
<td>50</td>
<td>26</td>
<td>36</td>
<td>42</td>
<td>26</td>
</tr>
<tr>
<td>(80%)</td>
<td>(98%)</td>
<td>(100%)</td>
<td>(52%)</td>
<td>(72%)</td>
<td>(84%)</td>
<td>(52%)</td>
<td></td>
</tr>
<tr>
<td>Use of estimation</td>
<td>40</td>
<td>44</td>
<td>37</td>
<td>22</td>
<td>35</td>
<td>37</td>
<td>23</td>
</tr>
<tr>
<td>(80%)</td>
<td>(88%)</td>
<td>(74%)</td>
<td>(44%)</td>
<td>(70%)</td>
<td>(74%)</td>
<td>(46%)</td>
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</tr>
<tr>
<td>Response time</td>
<td>33 sec</td>
<td>14 sec</td>
<td>20 sec</td>
<td>33 sec</td>
<td>24 sec</td>
<td>35 sec</td>
<td>43 sec</td>
</tr>
</tbody>
</table>

According to the percentages of success in producing the correct answer by
computational estimation by the prospective teachers, we can classify the questions in three groups of varying difficulty.

- **Difficult (<54%):** Q.3 (20%), Q.4 (38%), Q.12 (44%), Q.15 (46%), Q.5 (50%), Q.2 (54%) and Q.8 (54%).
- **Average difficulty (54%<%<74%):** Q.6(60%), Q.13(70%), Q.11(74%) and Q.14(74%)
- **Easy (80%< %<88%):** Q.10 (88%), Q.7(82%), Q.1(80%) and Q.9(80%).

We notice that problems are rated as difficult when: 1) they include multiplication or division with numbers that are difficult to handle by mental computations (75x36 (Q.3), 3.388/7 (Q.4), 62x79 (Q.12), 25.889 /52 (Q.15), 437x8 (Q.8)). 2) This is also the case of the addition of three fractional numbers (7/8+12/13+23/45 (Q.5)), and 3) the mean value of large numbers (Q.2).

**Medium difficulty** questions are the questions: 1) on percent value close to 10% (9.84% of 816 (Q.6)) which cannot be computed mentally by algorithm, 2) in multiplication of two-digit numbers (28x56 (Q.13)) and 3) in addition with five or six terms (35+42+40+38+44 (Q.11) or 27+49+38+65+56+81 (Q.14)).

**Easy questions** are identified the questions: 1) which include an addition of simple fractional numbers with one of the terms being 1/2 (Q.10), 2) addition of three terms (1.378+236+442 (Q.7)), 3) addition of decimal numbers (1.26+4.79+0.99+1.37+2.58 (Q.1)) and 4) the mean value of six measurements of the height of Mt Everest (Q.9).

We can conclude that the parameters affecting the degree of difficulty of a problem are as follows:

1. **The kind of operation** involved in the problem: Multiplications and divisions present more difficulty than additions.

2. **The characteristics of numbers involved in the operation:** Large numbers are difficult to deal with in mental calculations (e.g. 25.889/52). The number of terms in an operation i.e. addition with five terms (Q.11: 35+42+40+38+44) is more difficult than addition with three terms (Q.7: 1.378+236+442). The type of numbers involved: integers, fractional numbers, decimal numbers and percentages. For example, the addition of three fractional numbers (Q.5: 7/8+12/13+23/45) is more difficult than the addition of three integers (Q.7: 1.378+236+442).

3. **The context of the word problem:** The context of the word problem can direct towards computational estimation. For example, problems Q.2 and Q.9 are both about additions of large five digit numbers. But problem Q.9 is about the height estimation of the highest mountain on earth, a well-known and familiar landmark, making the solution to the problem easier.

The combination of these parameters determines, in a large degree, the difficulty of the problem. So, multiplications or divisions with complex numbers result in difficult problems (see Q.3, Q.4, Q.5, Q.8, Q.12, and Q.15). Additions, which are relatively easy operations to perform, become harder to solve by estimation when the terms of the additions are large numbers (see Q.2), or complex numbers like fractional numbers (see Q.5). In problem Q.1 we have an addition operation with decimal numbers, which are more complex in comparison to integers, but in this case the context of the problem is a familiar and everyday life situation, which is estimating an amount of money.
5.2. Errors

By examining the errors made by the students in the questions, we notice that these errors are grouped in two main categories: a) Errors in calculation of operations, b) Errors on the method of estimation, or a combination of the previous two groups. The first category of errors, are mainly errors on the calculating procedure within the mechanisms (or algorithms) involved in operations. Such typical errors from multiplication and division operations are presented below.

In question Q.3 (75x36), which was the hardest one, 34 (68%) out of the 50 interviewees gave the wrong answer. This was the question with the highest percentage of errors. 8 (16%) students initially performed correctly the operation (3x7=21—2100), but later made an error on the following compensation. In particular, 5 out of 8 performed the operation 5x6=30—300 and at the end they marked 2100+300=2400. The other three performed the operation 5x6=30, and at the end they marked 2100+30=2130. 16 (32%) of them made an error on the number of digits. That is, they performed the operation 3x7=21—210 (instead of 2100) and then performed, as previously mentioned, the consequent compensation (11 of them performed the operation 5x6=30 and at the end marked 210+30=240). The remaining 5 performed the operation 5x6=30—300 and at the end marked 210+300~500.

Finally, 5 (10%) of the students performed the operation 30x70=2100 without any consequent compensation. These students made errors of the second category, which are errors on the method of estimation.

In question Q.15 (25.889/52) 19 errors were recorded. In their majority (13 out of the 19 or 26%), errors were about the number of digits in the result (e.g. ~5000 instead of ~500). In the second category of errors, -errors on the method of estimation-, the students made an estimation, but it was done in the wrong way. These are not errors in computation, but on estimation procedure. In the following example, there is an error on the rounding methodology. In question Q.9 (height estimation of Mt Everest), 6 numbers are given round the number 29000 and the average of these 6 numbers is asked to be found by estimation. 8 (16%) of the students made a very vague estimation. For example, they gave the answer 28900 (6 of them), when all the given numbers differ only on their last digit. Also, in question Q.4 (3388/7), 6 errors (12%) have to do with gross rounding, (e.g. 3388/7--- 4000/7=~600 or 33/10=~3 and the answer given was ~300).

5.3. The accurate computation and mental use of written algorithms

A general observation in relation to the ability and the method of computation by the individuals in the test sample is that a large number of individuals resort to accurate computations by mentally using algorithms of the operations.

This is shown in table 1, from the difference of the success percentages in the first line, and the estimation percentages in the second line. Statistically, there is a significant difference between the percentage of success by estimation and the percentage of general success in the following questions: Q.4 (38% and 68%, z=3, p<0.01), Q.7 (82% and 96%, z=2, p<0.05), Q.8 (54% and 82%, z=3, p<0.01), Q.10 (88% and 98%, z=1,95, p<0,05), Q.11 (74% and 100%, z=3,86, p<0.001).

This difference between percentages of success is due to the percentage of individuals who made exact calculation rather than computational estimation. For example, in question Q.4, the difference in the success percentages (38% and 68%), is owed to 15
individuals (30%) who tried performing the division mentally in the same way as they would do it using pen and paper. For this reason, these individuals who performed accurate computation took an average time of 46 seconds to answer, while individuals who performed computational estimation took an average time of 29 seconds to answer. Another example is question Q.10, in which the difference in the percentage of success (88% and 98%), is because of the performance of 5 individuals (10%) who tried to add the two fractional numbers $\frac{1}{2}$ and $\frac{3}{8}$ and took twice as long (25 sec) from the individuals who performed computational estimation (12 sec).

It should be noted, that in Q.6 and Q.9 the numbers in the operations were complex and it was impossible to perform accurate mental computations, so there was no difference in the percentages of success between the two lines.

The observation described above, shows that a lot of prospective teachers do not know how to perform computational estimation and they end up doing mental exact computations and in most cases they perform mentally the written algorithm. This of course is harder and takes more time. That is to say, that same prospective teachers are not familiar with computation techniques and end up performing mentally written algorithms.

5.4. Use of strategies in computational estimations

Each of the 15 questions of the test can be answered in various ways, but the most appropriate strategy to be used is in effect, one of the following five strategies:

1. **Front – end strategy**: Although this strategy can be useful in all four types of arithmetical operations, its main use is in addition. It can be used in two steps. It focuses mainly on the left part of the number, ignoring the rest. After estimation is made, a concession of the parts of the numbers that were ignored is performed. For example, in Q.1: $1.26+4.79+0.99+1.37+2.58$ the sum of the integer part of the numbers is calculated (left part) $1+4+1+2=8$, and then a concession is made by adding the decimal parts of the numbers: a) $0.26+0.79$, b) $0.99$, c) $0.37+0.58$ which are approximately 1, so all the decimal parts are 3, thus, totally we have $8+3=11$. The front-end strategy is considered suitable for the following questions: Q.1, Q.7 and Q.8. This strategy was used correctly in Q.1 by 46% of the students, in Q.7 by only 8% and in Q.8 by 42%.

2. **Clustering or averaging**: This special strategy is applied in the addition of many numbers and in situations where numbers are around a specific value. For example, in Q.11, $35+42+40+38+44$ can be computed as $5 \times 40=80$. Clustering or averaging strategy is suitable for questions Q.2, Q9 and Q.11. This strategy was used correctly in Q.2 by 2% of the students, in Q.9 by 36% and in Q.11 by 8%. We noticed that a very small percentage of the students knew and applied correctly the averaging strategy.

3. **Rounding**: Numbers are rounded so that operations can be performed easier. After the computation with the rounded numbers there can be one or more operations for adjusting the final result. For example, in Q.13 $28 \times 56 = ?$, we adjust the numbers to the higher round figure $30 \times 60=1800$ and subsequently we can adjust to the lower round figure, $2 \times 60=120$, $1.800-120=1.680$. The rounding strategy is regarded suitable for questions: Q.3, Q.12 and Q.13. This strategy was used correctly in Q.3 by 14% of the students, in Q.12 by 44% and in Q.13 by 64%. It was
noticed that, in the three questions of two-digit number multiplication, Q.3: 75x36, Q.12: 62x79 και Q.13: 28x56, which are of increasing easiness, the percentage of the correct usage of the rounding technique is respectively increased.

4. **Compatible numbers strategy:** This strategy involves choosing the numbers that make computations easier and give a good estimate of the initial problem. For example, in Q.14 in the addition 27+49+38+65+56+81, the terms 27+81, 49+56 and 38+65 equal approximately 100. So, the sum is approximately 300. These pairs of numbers are compatible. The compatible numbers strategy is suitable for questions: Q.4, Q.14 and Q.15. This strategy is used correctly in question Q.4 by 32% of the students, in Q.14 by 10% and in Q.15 by 42%. Question Q.14 is a typical question in which this strategy can be used although only 10% of the students use it correctly while 48% turn to the strategy of rounding. This proves that the majority of the students are not familiar with this strategy.

5. **Special numbers strategy:** In many cases students are trained to separate numbers that are close to special values. This is the case, for example, with fractional numbers which are close to 0, 1/2 and 1. So, in Q.5, \(\frac{7}{8} + \frac{12}{13} + \frac{23}{45}\), \(\frac{7}{8}\) and \(\frac{12}{13}\) can each be considered approximately 1, and \(\frac{23}{45}\) approximately 1/2. So, the sum is approximately 2.5. The special numbers strategy is considered as suitable for questions: Q.5, Q.6 and Q.10, This strategy was used correctly in Q.5 by 50% of the students, in Q.6 by 54% and in Q.10 by 84% of the students. We note that almost half of the students use this strategy correctly and that as the easiness of the test is increased, so is the percentage of using this strategy.

Concluding about the use of strategies, it can be stated that students are not acquainted with the strategies of averaging and compatibles numbers. They are well familiar with the strategies of rounding and special numbers, but the degree of using these strategies depends each time on the difficulty of the arithmetic operations in the problem. These results are compatible with the results of others researches in which many teachers identified computational estimation with rounding (Alajmi, 2009; Trafton 1994).

6. **Conclusions**

The results of this research showed that the difficulty in computational estimation with a problem is affected by three main parameters: 1) the kind of operation in the estimation problem: Multiplications and divisions present more difficulty than additions. 2) The characteristics of the numbers involved in the operation: a) the magnitude of the numbers, b) the number of terms in an operation and c) the type of number (integers, fractional numbers, decimal numbers or percent values). 3) The context of the word problem. In similar results involving parameters 1 and 2, Goodman (1991) concluded that: estimation with fractions was more difficult than estimation with whole numbers, decimals, or percent. In the same way, Hanson and Hogan (2000) concluded that although students correctly estimated answers to most problems on addition and subtraction of whole numbers, they performed poorly on multiplication and division of decimals and subtraction of fractions.

Many researchers concluded, as referred in the literature review, that computational estimation was difficult for the students and teachers while the majority of them used exact computation to estimate (Alajmi, 2009; Hanson and Hogan, 2000; Levine 1982;
Reys, et al., 1991a; Reys et al., 1991b; Smith, 1993; Sowder & Wheeler, 1989; Threadgill-Sowder, 1984; Trafton, 1994; Yoshikawa, 1994). In this research, it was found that Greek pre-service teachers are weak to handle problems of computational estimation. A lot of them did not perform computational estimation and were trying to perform exact computations by employing the written algorithm mentally.

The lack of ability of pre-service teachers in computational estimation is related to a general inability in number sense. Like Yang et al., (2009) who found that Taiwanese pre-service elementary teachers show a low performance in number sense, so Greek pre-service elementary teachers show a low performance in number sense. Namely, Greek pre-service teachers show a general limited ability in performing mental operations, especially in the case of two-digit number multiplications and in the case of divisions with two-digit divisor. It is apparent that students did not perform mental operations easily and were not flexible in choosing strategies for these operations. This is also evident from the extended use of written algorithms.

These pre-service teachers have a lack of experience in using strategies of computational estimation, such as the averaging and the compatible numbers strategy. We can conclude that an intervention with a special training program in computational estimation is necessary for them. This program can focus on the weaknesses identified previously. Also, a future research can investigate the behaviors of Greek teachers in such a training program in computational estimation.

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French language and during my studies I attended many conventions and I took part in programs concerned my school. Finally, I passed first in a Greek and French master which will take place the first semester in the Aristotle University of Thessaloniki and the second semester in the University of Mans in France.
The effect of a learning group in the understanding of the structure of illustrated short stories for children of a preschool age

Aggeliki Tsapakidou
Associate Professor of University Western Macedonia
atsapakid@uowm.gr

Argyrios Kyridis
Professor (M) School of Early Childhood Education
akiridis@nured.auth.gr

Eirini Sivropoulou
Associate Professor of University Western Macedonia
esivropo@yahoo.gr

Abstract

Belonging to a group is one of the basic children’s needs. Integrating children into the school group is of utmost importance for the development of the educational process because they are involved emotionally, mentally and visually in the resolution of problems, proposals and constructions. By integrating into the learning groups, children, try to understand the educational material influenced not only by their own learning style but also by the learning methods other members of the group adopt. Thus, children in learning groups are able to reformulate the content of the communication process, draw conclusions and make generalisations, and eventually enhance their knowledge. The objective of the present research is to examine the degree to which learning groups contribute to the understanding of the structure of illustrated short stories. In other words, learning in a learning group will be evaluated and compared to learning based on individual effort. To this end, a pilot research was planned in two kindergartens (one located in an urban area and another in a rural village) over a three month period (March - May 2012). Sixteen toddlers (4.5 -5.5 years), were placed randomly into two groups (experimental and monitoring groups) so as to take part in this research which was conducted in two-phases. Initially a pre-test was given to both groups while at the end of the second phase, they took a post test. A teaching intervention was designed to take place twice a week for both groups for approximately 30 minutes. During the intervention the experimental group worked in small subgroups comprising three to four members, while the members of the monitoring group worked individually. The analysis of the data showed that learning in groups promotes understanding of small stories as compared to individual learning.

Keywords: learning group, illustrated short stories, preschool age, Group work

1. Introduction

In all social environments and in all cultures children wish to socialise with other children, and thus a big part of learning, if not the biggest, emerges or results from the interactions of the groups (Katz et al, 1990). However, there are only three preschool education curricula that promote work in small learning groups: the High/Scope curriculum of “High objectives”, Reggio Emilia’s program, and the educational program for all children (Roopnarine and Johnson, 2006). In the Greek context, the latest curriculum includes a chapter devoted to work and games in groups in the Kindergarten Teacher’s Book (Dafermou, et al. 2006). Furthermore, little has been done in examining the contribution
of learning in groups to the comprehension of illustrated short stories by preschool children in Greek state preschool education. Thus, the objective of the present research is to investigate the degree to which learning in groups contributes to the toddlers’ understanding of the structure of illustrated short stories. More specifically, the role and the importance of kindergarten’s life acquire a relatively new dimension in the learning process. However, there are related researches as (Anagnostopoulou, 2001; Avgitidou, 2008; Moumoulidou & Rekalidou, 2010).

In other words, it is examined if learning in groups as compared to learning individually can influence preschoolers’ performance.

The term learning group is employed to refer to a group of people (adults and children) that are emotionally, mentally and visually involved in the resolution of problems, in the configuration of meanings and in the creation of structures. It is a group in which each member learns not only as an individual but also through the learning methods of others. In group learning, the individual finds new perspectives and acquires strategies as well as new thought processes. Individuals as group members also learn by modifying, extending, clarifying and enriching their own ideas with the ideas of others. Most importantly, learning groups facilitate a type of learning which is different from that of individual learning as far as quality is concerned. In other words, the focus is on collective comprehension, which entails continuous comparison, discussion and modification of ideas which in turn develop learning to such a degree that cannot be achieved during individual learning. In a learning group, individuals bring up ideas for discussion, circulating one after another thus promoting collective knowledge (Krechevsky and Mardell, 2001).

Of particular importance is the evaluation of the learning group, because not only does it shape the process of constructing knowledge but also it provides kindergarten teachers with the opportunity to compare what they expected to happen with what actually happened during the learning process, to become aware of it and teach children a structured way to remember their own progress, knowledge, and doubts. It also offers the children an opportunity for reflection and self-assessment.

By the term understanding we mean children’s ability to visualize the meaning of a form of communication that is given to them in writing or orally or through pictures. In this case, the child is able to reformulate its content, to see the relation between its parts and to reach conclusions and generalisations (Trillianos, 2003:143). “It is the process of constructing the intellectual representation, which draws its elements from the text” (Sfiroera, 1998:108) or “is an interaction between the active thought of the reader and what the text says” (Curto et al, 1998[b]: 115).

Preschoolers’ understanding of texts is quite important and constitutes a source of pleasure and creation, through information, briefing, critical thought, socialization, independence; it is also an essential precondition for every form of success (Vamvoukas, 1990, Porpodas, 2002). Children learn to understand texts through discussions with other readers (Smith, 2006: 430), through interacting with a variety of texts including poetry, advertising pamphlets etc. In doing so they connect reading with writing and speaking as they constitute thought processes that focus on the creation of meaning, are related with reactions, and promote the interaction of children with texts and with other children (Pearson, 2001). Specifically, there are two categories of studies that examine the ways children learn to understand stories over the past thirty years: Those that support reading
out aloud as a means of understanding illustrated stories, and those that consider that all “children are facilitated in the comprehension of a story by its reconstruction” (Brown, 1975) that is to say through theatrical games. More analytically, the first category includes research that supports that the reading out aloud of stories during preschool age enables children to understand stories, to recognize the basic elements of literature and their functions (Hickman 1981, Cochram-Smith 1984, Kiefer 1988, Purcell-Gates 1988). Studies that support theatrical games, as a means of understanding the structure of the story belong to the second category (Sachs et al, 1984); that is to say, children’s participation in theatrical games, the verbal reconstruction of the story as well as their interaction with peers within the context of the story, enhance their understanding (Micciniti and Phelps 1980; Pellegrini and Galda, 1982).

More analytically, the research questions are:

- What is the role and the importance of teamwork over individual?
- What is the appropriate group size for preschoolers?
- What is the teacher’s role in a group learning?

2. Method

2.1. The sample

The research was conducted in 2012 in two public kindergartens in the Prefecture of Florina, Greece: one in the city of Florina and another in a village nearby. It lasted three months from March up to June. In total sixteen toddlers between the ages of four and a half and five and a half years participated. Each class was divided into two groups: the experimental group with four boys and four girls and the monitoring group with 7 boys and one girl. The children were randomly put into each group.

For the teaching intervention, 12 illustrated short stories were selected and taught in the same sequence by the two kindergarten teachers that participated in the research. The criteria with which the illustrated short stories were selected were the following:

- The plot can be predicted because of the illustrations
- It is a narrative by approved Greek and foreign writers and illustrators.
- Their content is varied pleasant so as to cultivate the preschoolers’ imagination.

The research was conducted in two phases. As for the experimental group the teaching intervention involved teaching the group as a whole, while in the monitoring group it involved individual teaching.

The toddlers were evaluated both before and after the teaching intervention by taking pre and post tests (Benett, 1984; Sanders, 1992; Bloom and Quint 1999; Guba and Lincoln, 1981).

The phases of the research

- First phase: pre- test

Both groups were asked to attend individual structured interviews that lasted approximately twenty minutes for each child and took place in a specifically designed space of the kindergartens in the period from the 29th to the 31st March 2012. The kindergarten teacher initially read the illustrated short story by Trivizas “The Congested Rooster” (Ο συναχωμένος κόκορας) and when the reading ended, she filled in the following outline of the narrative with the comments of the children.

Outline of the Narrative (Gambrell & Dromsky, 2000)
Date:……………………………………………………………….
Full name……………………………………………………

1. In this story the problem begins when………………
2. After that………………………………………………
3. Then………………………………………………………
4. The problem was solved when…………………………
5. The story ends when……………………………………

The initial measurement helped us determine the potential differences and interactions that may exist in the population which had to be taken into consideration during the final measurement.

- Second phase: The teaching intervention and the “plot dice”\(^1\)

In short, the process of the intervention based on the use of the “plot dice” is as follows:

- \(^1\)^1 \(^1\)st step: Reflection

The children are given pictures from an illustrated story and they are asked to create their own story, with the aim of narrating, elaborating and recording the story, so that it can be sent to children of other kindergartens in order for them to read it and comment.

- \(^2\)^2nd step: Composing and narrating the story

In this phase the children are called upon to “read”/ observe the suggested pictures from an illustrated short story and afterwards to place them in a reasonable sequence so as to create their own story with a beginning, a middle and an end, and then to narrate it. This is a way to make children understand the elements of the narration and use them for the composition of their own story. In brief, by creating their own story they become more familiar with the narrative structures of a literary story.

- \(^3\)^3rd step: Interpreting the story through the use of the “dice plot”

After the composition of the story the children with the kindergarten teacher attempt to interpret the story created by the group. In doing so they use the magical “dice plot” which has to be thrown by each child and when the dice stops the child is required to recognize the word on the top, explain how it is connected to the story and comment on it. The dice stops being thrown when all the words written on its sides are presented. In this way children describe, explain, comprehend and interpret the story they created through the pictures. When the game with the “plot dice” finishes, so do the elaboration and the interpretation of the story. Then the children are led to the next step which is reconnecting or re-linking the story.

- \(^4\)^4th step: Recomposing/re-linking, recording and posting the illustrated story.

In this phase the recomposition or the re-linking of the story takes place. The children recount the story that the teacher recorded using the narrative outline. Then the teacher reads slowly and clearly, always showing the words, then the children try “to read” them. Finally, the story is put in an envelope so that it will be sent to children at other kindergartens.

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\(^1\) The “plot dice” is a cube made of paper or plastic or chipboard. On each side there is one of the words: Beginning, Problem, End, 1st Event, 2nd Event and a blank side.
The effect of a learning group in the understanding of the structure of illustrated short stories for children of a preschool age

Aggeliki Tsapakidou, Argyrios Kyridis, Eirini Sivropoulou

5th step: The kindergarten teacher reads the story

In the final phase the kindergarten teacher reads the actual illustrated short story in order for the children to appreciate the perspective of the writer.

Third phase: post test

Upon completion of the teaching intervention the post test was conducted (Fitz - Gibbon and Morris, 1987). In this phase, which took place from 5th - 8th June 2012, the same process as in the pre test was followed. The kindergarten teacher read the illustrated short story by Trivizas “The Congested Rooster” (O Sinaxwmenos Kokoras) to each child separately and when the narration ended, she filled in the narrative outline with comments made and words used by the preschooler.

The post test measured the results that were expected to be noted in the population and constitute the dependent variable of the present research activity. The same tools were employed for both the initial and final measurements which referred to the same dexterities, so that we could have the best possible information about the influence and the effectiveness of two teaching programs. It is often difficult to determine with precision the one-track effect of one specific factor because those involved in the research are social subjects. However, we tried to ensure the satisfactory and necessary conditions that would limit the contribution of random social factors (Stocking, 1999).

The collection of the data was done with the use of interviews and the answers of the children were graded by researchers based on cognitive achievements and the perception of objectives. The grading of the answers was done by two adjudicators, so as to ensure the greatest possible objectivity (Benett 1984, Stocking 1999). The evaluation of the results of the program was based on the differences in achievement between the two groups during their initial and final measurements. Provided that other factors have been excluded, these differences are directly related to the outcomes of the program.

3. Results

The toddlers in the experimental group as well as those in the monitoring group got the lowest grade in question (2). As opposed to the outcomes in the monitoring group where the intervention by the teacher did not produce any successful results, the teaching intervention in the experimental team showed that there was an improvement in understanding (0,12 units). It becomes obvious then that the teaching intervention referring to the group as a whole contributed to achieving better results for each question of the interview. On the other hand, the individualized teaching intervention applied in the monitoring group did not improve the preschoolers’ understanding of the story. This is reflected in the results of each question of the interview.

Table 1: Average value and correct variations of the grades of each question and overall grades for the experimental group and the monitoring group, before and after the intervention by the teacher.

<table>
<thead>
<tr>
<th>Question</th>
<th>Before the intervention by the teacher</th>
<th>After the intervention by the teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Experimental Group</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The effect of a learning group in the understanding of the structure of illustrated short stories for children of a preschool age

<table>
<thead>
<tr>
<th>Question</th>
<th>Before the intervention by the teacher</th>
<th>After the intervention by the teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Question 1</td>
<td>1,63</td>
<td>0,518</td>
</tr>
<tr>
<td>Question 2</td>
<td>0,63</td>
<td>0,518</td>
</tr>
<tr>
<td>Question 3</td>
<td>1,00</td>
<td>0,926</td>
</tr>
<tr>
<td>Question 4</td>
<td>1,75</td>
<td>0,463</td>
</tr>
<tr>
<td>Question 5</td>
<td>1,25</td>
<td>0,886</td>
</tr>
</tbody>
</table>

Monitoring Group

<table>
<thead>
<tr>
<th>Question</th>
<th>Before the intervention by the teacher</th>
<th>After the intervention by the teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Question 1</td>
<td>1,38</td>
<td>0,744</td>
</tr>
<tr>
<td>Question 2</td>
<td>0,63</td>
<td>0,744</td>
</tr>
<tr>
<td>Question 3</td>
<td>1,13</td>
<td>0,991</td>
</tr>
<tr>
<td>Question 4</td>
<td>1,63</td>
<td>0,518</td>
</tr>
<tr>
<td>Question 5</td>
<td>0,63</td>
<td>0,744</td>
</tr>
</tbody>
</table>

It is characteristic that the Average Value (Mean) of the overall grades of the experimental team increased by 4.25 units, while the Average Value (Mean) of the monitoring group increased only by 0.88 units. The effect of the intervention by the teacher is obviously greater for the experimental team. The monitoring of cross-correlations confirmed the experimental group’s better performance after the intervention by the teacher ($F = 6.721, p< 0.05$ and $t = 3.861, p < 0.01$) while no essential difference was shown in its performance at the pre-test.

The cross-correlations of the overall grades according to gender and the degree of urbanisation (urban and rural region) show no differentiations between the two phases of measurements, nor between the two groups.

**Discussion**

The above data allowed to recommend certain suggestions in regard to the main aim that we set out before the research was conducted, that is to say, to investigate the different effects of group and individual learning in the understanding of the structure of illustrated short stories.

The basic finding is that in four out of five questions relating to the outline of the narrative the children of the experimental group showed significant improvement, while little improvement was shown in one question «After that», as opposed to the children of the monitoring group. We attribute this fact to:

a. Group work which contributes to the processes of development and learning of a child (Germanos, 2000), and positively influences cognition (Edwards et al. 2001). It promotes and enhances rationalization and negotiation skills (Katz et al, 1990),...
it reinforces creative thought (Matsangouras, 2000) and most importantly, it fosters the creation of collective knowledge and understanding to which children who work individually, have no access (Krechevsky & Mardell, 2001). Johnson and Johnson (1989) have already supported that group work for the achievement of a common objective leads to greater success, more involvement in thoughts of a superior level, more frequent production of new ideas and solutions, and more conveying of knowledge from the group to the individual. Furthermore, Slavin established that from the 45 studies that he conducted, 37 showed a higher academic performance through learning in groups as compared to individual learning (Anagnostopoulos, 2001: 34).

b. The small size of the group and the cooperation that developed between its members. It is necessary for learning groups in kindergarten to be small (2-4 toddlers), because children express more positive sentiments when they are in smaller groups (Cummings and Beagles-Ross, 1983), get involved in discussions (Howes and Rubenstein, 1985), are more creative and cooperative (Ruopp et al, 1979), greater confidence develops between the members, the feelings of responsibility become more intense and closer interpersonal relations are cultivated (Charalambous, 1996).

c. The role of the kindergarten teacher. The role of the kindergarten teacher in a learning group is that of a co-participant. Her participation consists in her ability to listen, observe, facilitate the discussion, determine the objectives, function as a source, intervene when the children need her to, provide opportunities for discovery and delight. Participation also means that the kindergarten teacher shapes the process of the construction of knowledge, realizes along with the children that to work, to feel and to think together is of equal importance to the actual content of learning and above all, it confirms that learning groups create culture and knowledge (Krechevsky and Mardell, 2001). When children engage in adialogue with adults’ support, we discover that they reconstruct their past knowledge, they cooperate and collaborate in structuring the revised knowledge about the research topic and they undertake active role in the production and acquisition of knowledge and understanding. Additionally, various situations are being created, full of dilemmas so as to offer children opportunities to make decisions and see the consequences and to suggest alternative solutions.

On the other hand, from the qualitative observations of the two groups, what emerged was that the experimental team improved their vocabulary, a fact that was confirmed by another research which showed that illustrated short stories contribute to the enrichment of the vocabulary of toddlers (Sivropoulou-Chatzisavvides, 2002). Moreover, it appeared that in the experimental group the children’s critical thinking improved through interpretations, rationalizations and questions related to the stories created by themselves. It should still be noted that in order to make up their own story, children of the experimental group, activated their previous knowledge which meant that in order to achieve reading comprehension the children built active relations between what was already known to them and the new information provided by the illustrated story (Gambrell and Dromsky, 2000).

An example for critical thinking: A story created by the children:

Once upon a time a child and his parents went on a trip to Florina to the mountains.
was snowing and because they felt cold they lit a fire to warm up, and there were some elderly people who helped them. But a lot of children were cut off on the mountains in Vigla and they could not get down. The police then arrived and helped them to come down so that they wouldn’t freeze. Then they came down and returned home and went to the park and played with the children.

The present study should be considered an initial investigation of the degree to which work in small learning groups in kindergartens contributes significantly to the comprehension of the structure of illustrated short stories as opposed to individual work. It would be useful if it were repeated in a bigger student population in order to further investigate other parameters such as the quality and the quantity of interactions that develop in small groups or to verify the duration of the results so that they can be generalisable.

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The effect of a learning group in the understanding of the structure of illustrated short stories for children of a preschool age


Illustrated short stories that were used in the intervention by the teacher

«Unique Melpo», (The original Greek title is «Η Μζλπω η Μοναδική»), Maria Rousaki, Papadopoulos, 2001.
«Something Special” (The title is «Το κάτι άλλο»), Katherine Cave & Chris Rinds, Patakis, 1997.
«Nancy the little Gosling», Eve Thorlet, pub. Patakis.
«The marrow and the elf» (The original Greek title is Η κολοκυκιά και το ξωτικό), Nicholas Andrikopoulos, Ellinika Grammata, 2003.
«Melpo will be mad», (The original Greek title is «Ποιοσ ακοφει τθ Μζλπω»), Maria Rousaki-Villa, Papadopoulos, 2003.
«Anastasi and the bus queue», (The original Greek title is «Ο Αναςτάςθ και η ουρά τθσ στάςθσ»), Eugenios Trivizas, Ellinika Grammata, 2000.

Brief biographies

Aggeliki Tsapakidou
Aggeliki Tsapakidou is currently an Associate Professor of Physical Education in the Department of Preschool Education of the University of Western Macedonia in Greece. She holds a PhD from the Faculty of Physical Education of the Aristotle University of Thessaloniki in Greece. Her research interests include psychokinetic, rythm with emphasis in the field of socio-emotional activities. She has published several papers in Greek and international scientific journals.

Argyris Kyridis
Argyris Kyridis was born in Athens. He graduated from the Department of Political Science and Public Administration of the Law School of Athens University, where he received his Doctor of Sociology. Also did postgraduate studies in Sociology and Political Science at the University of London (University of London - Birkbeck College). He is currently working as a professor of sociology of education at the School of Early Childhood Education - Aristotle University of Thessaloniki.
Eirini Sivropoulou
Eirini Sivropoulou worked as an associate professor at the Department of Early Childhood Education, UOWM. She has taught early childhood education and teaching methodology at undergraduate and postgraduate level as well as in teacher training programmes. Early childhood education curricula, teaching picture story books, sociodramatic play and developmental skills are among her research interests.
The conception of the “self” in immigrant children: The case of Albanians in the Greek educational system

Panagiotis Giavrimis  
Lecturer, Department of Sociology, University of the Aegean, Greece  
giavrimis@soc.aegean.gr

Makrina Zafiri  
ESP/EAP teacher, University of Thessaly, Greece  
m_nzafiri@yahoo.gr

Vasilis Charitos  
Educator, Greece  
vahar@sch.gr

Adamantios Papastamatis  
Associate Professor, Department of Educational and Social Policy  
University of Macedonia, Greece  
papastam@uom.gr

Abstract

The aim of this study is to explore the self-concept of Albanian students, who attend Greek primary schools. Important changes in the last decades have resulted in an influx of immigrants. The school as a secondary institution of socialization plays an important role in the accession of immigrant students. The number of immigrant students in Greece has risen to over 10% of the total number of students in Primary and Secondary Education. The sample of this research consisted of 399 Albanian students in fifth and sixth grade primary schools from the region of Attica. The results of this research showed that foreign students have formulated an identity of the “self” which may or may not be connected to academic factors. It is interesting to note that age, gender, school performance and the parents’ educational level differentiate a student’s self-concept.

Keywords: The “self”, self-concept, immigrants, education.

1. Introduction

Greece, including many other countries in Western Europe, have had an influx of immigrants, who started arriving in the 90s, and have continued to enter the country until today. The breaking up of the former Soviet Union and the collapse of many communist regimes, the influence exerted by international mobility, economic interdependence, the unequal pace in demographic evolution and the desire for better living conditions (Liberaki 2001), the inability to identify oneself within the society in which they live and its people, (Kassimati 1998) and last but not least religious totalitarianism, have brought about a dramatic inflow of immigrants from eastern and central Europe (Albania, Bulgaria, Ukraine, Romania and Georgia), as well as the Third World (Iran, Iraq, Agypt, Pakistan etc.) (Petroniti & Triandafyllidou 2003).

In Greece, immigrants arrive in a variety of ways and usually settle down for long periods of time in urban areas (mostly) in Attica and central Macedonia (Georgopoulou 2005)
which function as distribution centers to other areas including rural areas. In recent years there is an increasing number of immigrant workers working in industry and holiday resorts across the region. In 2004, it was estimated that 973,677 immigrants from countries which do not belong to the European Union, work in Greece. This is 8% of the population of the country (UN 2005). Information data, concerning this decade, is derived from a census conducted on the 18th of March 2001 (Georgopoulou 2005). Data derived from the Institute of Migration Policy, shows that the number of immigrants living in the country in 2007 was estimated to around 1100,000 to 1200,000 (Delithanasi 2007).

This weakness of the governmental system to register immigrants shows the divergence of the official data from data presented by non-governmental organizations (Greek Committee for Immigrants, CARITAS etc.) or even immigrant associations themselves. The reviews derived from different sources were published in recent years (Petroniti & Triandafyllidou 2003). These reviews show that the sudden influx of immigrants constitutes a very important aspect of public life in modern Greece, but it also defines the nature and the extent of a situation which has to be taken seriously by developing policies (for example in the educational system, in the healthcare system, etc.) (Kavounidi et al. 2008). The educational system plays an important role in the inclusion of immigrant students in the social-cultural environment. From Greek research data immigrant students constitute approximately ten percent of the total number of students in Greek schools (Bougioukos & Fasoulis 2012).

1.2 Immigrant Children in the Greek Educational System

The Greek educational system has legislated for “reception classes” with the following laws: Law 1404/83, article 45 (Official Gazette 173/2411/1983), Law 2413/96 (Official Gazette 124 v. A/17.6.1996) which presents the educational framework (purpose, content), the teaching structure (intercultural schooling) and the staffing of schools (teachers, administration of schools) and last but not least the establishment of the Greek Institute of Multicultural Education (GIME) (IPODE in Greek). The ministerial ruling in article F. 10/20/C1/708 (Official Gazette 1789B/28-9-99), determines the functions of these “reception classes”, as well as coaching classes. Complementary adjustments are presented with Law 2817/00 (Official Gazette 78A/14.3.00), these adjustments concern matters of Greek education overseas, as well as minority schooling.

Albanians constitute more than 70% of all immigrant students. According to data published by the Educational Centre of Research (KEE in Greek) there were 622 reception classes in 554 primary schools, as well as secondary schools (the total number of primary and secondary schools around the country were 13984) (Koulaidis 2006). Reception classes implemented an intensive program for learning Greek as a second language. The program is implemented with the parallel attendance of the students of some of the lessons which are offered in a regular class (Official Gazette 1789B/28-9-99). Simultaneously, in 131 schools around the country, 239 coaching classes (CC) functioned successfully. The CCs’ were attended by immigrant students who encountered difficulties in the learning of the Greek language. CCs’ usually took place after school hours (Official Gazette 1789B/28-9-99).

Immigrant students formulate an understanding of the “self” through their national identity and through the strategies they employ to adjust to their new social environment.
1.3 National Identity and “Self-concept”

In post-modern times, a person’s identity is considered a social construct (Hoffman 1998). According to contemporary perceptions, a person’s existence has a multiple and often contradictory identity which does not constitute a unified and cohesive entirety (Fornäs 1995). The definition of identity expresses the “dominant culture”, the way someone self-determines and reconstructs dominant patterns of social, cultural, political hierarchies and categorizations (Giddens 1991). The domination of “hierarchical prototypes” ensure social consent through formal and informal institutions (such as education, the media etc.) mediated by social structures in everyday relationships which are reproduced through stereotypical reconstructions (Giddens 2009). The concept of the “subjective identity of a person” refers to “the way a person perceives himself in relation to the others” (Psimitis 2006), something which influences the beliefs and attitudes of individuals towards social life in general. Many researchers believed that the national identity of a person is not a predetermined and stereotypical concept but a product of social interaction (Jenkins 2007). It is a continual process of heterodefinement, which perpetually contributes to the uniqueness of a national identity and determines ways of signaling of membership and exclusion (Barth 1969:15) The national identity, as all other identities (family, class, locality, religious, gender etc.), classifies people differentiating them and giving emphasis on their differences, not their similarities (Durovic 2008). Functionalists believe that there are special values which are attributed to different national-cultural groups. For Damanakis (2001:9), “a national identity expresses the ‘diachronic level’ of defining the identity of an individual, this can consist of common characteristics and collective experiences, including myths”.

Identities have an empirical character and are formed through a person’s interaction with his immediate social and cultural environment. The cultural and national identity can be dealt with as part of a person’s self-conceptualization which is derived from the knowledge which belongs to a particular social group, as well as the value or the sentimental meaning rendered to the event which constitutes part of this group (Kleftaras 2003).

People with different cultural identities are often victims of exclusion by the dominant group, which has political, social and economic power, bestowed to it (the group) by history. For example exclusion may take place within an educational system when the society, in which the educational system operates, ignores the cultural characteristics of the group which operate within it, but it may also exist when these differentiating elements are officially recognized and respected (Tressou 1998:651). There is literature in the field which connects immigrants to low achievement, problematic/antisocial behaviour, drop out and social exclusion, due to integration processes and socio-economic conditions (Portes & Rumbaut 2005, Thomson & Crul 2007) The negative experiences of people contribute - to a certain extent - to the shaping of their self-conceptualization and self-esteem (Nesdale & Mak 2003). In international bibliography national identity is a part of an individual’s self-concept (Heaven 1999).

The sociocultural context (family, educational system etc.), one's experiences, the significant others' perceptions, and the individual's characteristics all affect one's self-concept (Shavelson & Marsh 1986). According to Cooley (1962) and Mead (1934), the...
understanding of the individual lies in constituting his/her self-concept and self-determination by the “others” (Jenkins 2007:47). Through a spectrum of subjective processes of conceptualization, the individual understands or misunderstands the objective picture of the “self”. “Self-concept” refers to the amount of self-information that a person collects, memorizes and organizes systematically (Bracken 1996, Purkey 1970, Schwarzer & Jerusalem 1989).

Self-concept is structured in a different way in different environments or civilisations. This is evident when people who come from different cultures live in the same cultural community (Rosenberg, 1979). Markus and Kitayama (1991), in their theory concerning cultural factors that determine the concept of the “self” stress that western societies promote a mode of the “self” which is characterised by independence, in contrast to Asian societies which emphasise upon interdependence and believe that a person is determined through his relationships with other people. The understanding of the self in immigrant students is related to their social inclusion and their school achievements (Areepattamannil & Freeman 2008, Cooley & Ayres 1988).

In similar researches conducted in Greece immigrant students have a low self-concept in domains which deal with their school ability and their self-respect, which influence their achievements at school (Georgiou 2007). At the same time, in areas of self-concept which deal with their parents and their physical abilities, their self-concept is high. Racial stereotypes are noticed in males who seem to have a high self-concept compared to females in areas such as “external appearance”, “physical abilities and sports” and “Mathematics”. Immigrant students seem to have a very high anxiety which is directly related to low self-esteem including areas which deal negatively with aspects of self-esteem and self-concept which concern the “important-other” (parents-peers) (Giavrimis et al. 2003).

The aim of this study is to explore the self-concept of Albanian students' who attend Greek primary schools. In addition, possible intergroup differences were explored in the immigrant students' profile using school achievement, gender and parents’ educational level.

2. Methodology

2.1 Sample

The sample of this research consists of 399 Albanian students from fifth and sixth grade in Greek primary schools from the region of Attica. All immigrant students were born in Greece. Of these students, 188 (4.71%) were boys and 211 (52.88%) were girls. 186 (46.61%) students showed a low performance at school whereas 213 (53.38%) students showed a moderate or high performance. As concerning the educational level of the immigrant student’s parents, 48 fathers (12.03%) had finished primary school (P), 124 (31.08%) had finished junior-high school (JH), 97 (24.31%) had finished senior-high school (SH) and 130 (32.58%) had graduated from a Technical College or a University (U/TC). The research showed that the mother’s educational level was as follows: 36 (9.02%) mothers had finished primary school, 133 (33.33%) mothers had finished junior high school, 100 (25.06%) mothers finished senior high school and 130 (32.58%) mothers had graduated from a Technical College or a University.
2.2 Questionnaire

The questionnaire entitled: Self-Description Questionnaire I (SDQ-I, Marsh, 1988) was completed by the students and consisted of 76 questions. SDQ-I is a multifaceted measure of self-concept (5-point, Likert-type scale). The instrument was analysed for its psychometric features, taking into consideration the distribution of single items and combined scores. The variables were factor analysed by employing the Principal Components method for factor extraction and by rotating the factors orthogonally. Reliabilities of the scales were computed using Cronbach’s alpha coefficient. The eight factors were labelled as follows: a) Mathematics (Maths) consisted of 11 questions (alpha= .72). b) Language (Lang) consisted of ten (10) questions (alpha=.82). c) Physical Appearance (PA) consisted of 12 questions (alpha=.84). d) Physical Abilities/Sports (PAS) included 10 questions (alpha=.81). e) Relationships with Peers (RP) include 8 questions (alpha=.77). f) School Performance and Ability (SPA) include nine (9) questions (alpha=.84). g) Low Self-Esteem (LSE) included eight (8) questions (alpha=.69) and h) Relationships with Parents (RPar) includes nine (9) questions (alpha=.67).

A questionnaire entitled: A Questionnaire of Demographic data and School Knowledge-skills. Demographic data (gender, parents’ educational level, etc.) and achievement data from the students’ files were also obtained. For their achievements the aim was to collect information concerning students’ grading in three (3) basic subjects of the school curriculum (Language, Mathematics and History) during the three (3) school terms (a three month period).

2.3 The collection of research data

Stratified random sampling was used by researchers. Initially, they made a list of sub-regions in Attica and sampled them randomly. Afterwards, they sampled schools randomly from the lists of primary schools which were selected in the sub-regions. The researchers contacted the directors of schools selected and informed them about the exact period of time that the research would be carried out, as well as its aim and its importance and asked for a list of immigrant (Albanian) students of fifth and sixth grade. Then they sampled immigrants randomly from those lists.

The researchers themselves handed immigrant students the questionnaire, so that it would be possible for the participants to have direct, timely and valid clarifications, they meet up with any problems. In addition, there was a cover-letter that informed every participant about the aim of the research and assured him/her that the content of his/her answers would be confidential.

3. The Findings

In table 1 the mean score shows that students have a positive conception of the self concerning academic matters (mathematics, school achievements and abilities, etc.), or in other areas (external appearance, physical abilities etc.) and at the same time their self-esteem also seems to be high. They seem to have a good relationship with their parents, their peers and they also seem to do well in athletics.
Table 1: Means, Standard Deviations, Mediums and Quartiles concerning Students Description of the Self Questionnaire

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (M)</td>
<td>3.42*</td>
<td>3.81</td>
<td>3.67</td>
<td>4.15</td>
<td>4.00</td>
<td>3.65</td>
<td>2.11</td>
<td>4.52</td>
</tr>
<tr>
<td>Median</td>
<td>3.50</td>
<td>4.00</td>
<td>3.75</td>
<td>4.20</td>
<td>4.13</td>
<td>3.67</td>
<td>2.00</td>
<td>4.67</td>
</tr>
<tr>
<td>Std. Dev. (SD)</td>
<td>.81</td>
<td>.67</td>
<td>.61</td>
<td>.69</td>
<td>.68</td>
<td>.81</td>
<td>.80</td>
<td>.46</td>
</tr>
<tr>
<td>Percentiles</td>
<td>10</td>
<td>2.20</td>
<td>2.90</td>
<td>2.67</td>
<td>3.20</td>
<td>2.44</td>
<td>1.38</td>
<td>3.89</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>2.90</td>
<td>3.30</td>
<td>3.25</td>
<td>3.80</td>
<td>3.63</td>
<td>3.22</td>
<td>4.33</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>3.50</td>
<td>4.00</td>
<td>3.75</td>
<td>4.20</td>
<td>4.13</td>
<td>3.67</td>
<td>4.67</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>4.10</td>
<td>4.30</td>
<td>4.17</td>
<td>4.80</td>
<td>4.22</td>
<td>2.50</td>
<td>4.78</td>
</tr>
</tbody>
</table>


It should be pointed out that the data concerning gender differences shows the following: a) both groups have a high self-concept in all domains, b) the differences we notice among the different groups are statistically important in domains such as: “Maths”, “PA” “PAS” and the dimensions concerning “RP”. Boys seem to have a higher self-concept in domains which deal with their achievements in “Maths”, in “PA” and “PAS”, as well as “RP” (Table 2).

As concerning the school class we notice that there are differences in the: “PA”, “PAS”, “RP”, “SPA” and “RPar”. Younger students have a more positive conception of the “self” in areas which concern their external experience and their physical abilities and athletics, their school achievements as well as their relationships with their parents.

For a more effective comparison concerning the “self-concept” of students in relation to their school achievements we used Clusters Analysis and we divided the students into two (2) groups: a) a low achievement group, and b) a high and medium achievement group. The data which was used was what was gathered from the questionnaires entitled “School Achievements”, which were filled in by the teachers. There is a differentiation produced by the two (2) levels of school achievement: “RP”, “SPA”, “LSE”, “RPar”.

Children with low achievements seem to have a low self-esteem in areas which concern relationships with parents and people of the same age group as themselves in their school achievements and self-esteem.

Table 2: Self-concept of young people in relation to their sex, their school class and their school achievements

<table>
<thead>
<tr>
<th>Factors</th>
<th>Gender</th>
<th>Class</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>t (398)</td>
</tr>
<tr>
<td>Maths</td>
<td>M</td>
<td>3,64</td>
<td>3,22</td>
</tr>
<tr>
<td></td>
<td>S. D</td>
<td>0,72</td>
<td>0,84</td>
</tr>
<tr>
<td>Lang</td>
<td>M</td>
<td>3,79</td>
<td>3,83</td>
</tr>
<tr>
<td></td>
<td>S. D</td>
<td>0,7</td>
<td>0,64</td>
</tr>
<tr>
<td>P. A.</td>
<td>M</td>
<td>3,78</td>
<td>3,58</td>
</tr>
<tr>
<td></td>
<td>S. D</td>
<td>0,57</td>
<td>0,63</td>
</tr>
<tr>
<td>P. A./S.</td>
<td>M</td>
<td>4,37</td>
<td>3,94</td>
</tr>
<tr>
<td></td>
<td>S. D</td>
<td>0,68</td>
<td>0,64</td>
</tr>
<tr>
<td>R. P.</td>
<td>M</td>
<td>4,09</td>
<td>3,93</td>
</tr>
<tr>
<td></td>
<td>S. D</td>
<td>0,55</td>
<td>0,77</td>
</tr>
<tr>
<td>S. P. A.</td>
<td>M</td>
<td>3,71</td>
<td>3,59</td>
</tr>
</tbody>
</table>

http://www.kosmit.uowm.gr/site/journal (ISSN: 1792-8494)
The father’s educational level also seems to play a very important role in a student’s perception of the self especially in language learning and teaching ($n^2=.071$), “RP” ($n^2=.015$), “PAS” ($n^2=.091$), “LSE” ($n^2=.198$) and “RPar” ($n^2=.040$) (Table 3). We used Scheffe’s method of multiple comparisons to compare the educational level of the father, the findings of which are as follows: a) children whose father had only finished primary school, had a lower self-esteem compared to students whose parents were of another educational level ($p=.000$), b) children whose father finished primary school, believe that they are “not managing very well” in language, compared to children whose father graduated from a university or a technical college ($p=.029$), these children also seem to be under achievers at school and with fewer academic abilities ($p=.000$), c) children whose father graduated from high-school seem to have more difficulties at school ($p=.008$), compared to children whose father graduated from a university or a technical college, they also seem to be under achievers, with fewer academic abilities ($p=.003$) and with a low self-esteem ($p=.016$), d) children whose father had graduated from high-school believe that they have difficulties ($p=.039$) in their relationships with other children, compared to children whose fathers graduated from a university or a technical college, they seem to present lower school achievements and abilities ($p=.000$) and a lower self-esteem ($p=.000$), e) children whose father finished primary school believe that they have fewer difficulties in their relationships with their parents (Table 3) compared to children whose parents graduated from high-school.

The mother’s educational level seems to influence the “self” in Primary School children, especially in “Maths” ($n^2=.071$), “Lang” ($n^2=.071$), “RP” ($n^2=.015$), “SPA” ($n^2=.091$), “LSE” ($n^2=.198$) and their “RPar” ($n^2=.040$). We employed Scheffe’s method of multiple comparisons to compare the educational level of mothers. Our findings showed that: a) children, whose mother finished primary school had a low self-concept of their school achievements and abilities ($p=.000$) compared to children, whose mothers received further education, b) children whose mothers’ finished primary school believe that they are not doing well in “Language” compared to all the other children, c) children, whose mother has finished primary school, seem to have more problems in their relationships with other children of their age group, as well as in their relationships with other children of their age, including their parents, compared to children whose mother has finished high-school or university/technical college, d) children whose mothers have finished junior high-school mention that they have difficulties in mathematics ($p=.042$) compared to students whose mothers have graduated from senior high-school, they also have a low self-esteem ($p=.03$), as well as a lower self-esteem ($p=.001$), compared to students whose mothers have graduated from senior high-school.
4. Concluding Remarks

The formation of the “self” is influenced by the conceptualization and internalization of a person’s interaction with his cultural and social environment, but most importantly with other people who are very important in his life. The educational environment and the members who constitute the educational community play an important role in the way an individual perceives of himself or herself.

Immigrant students conceive positively of themselves and are able to manage matters positively in areas such as academic achievements (mathematics, school achievements and abilities, etc.), or in other fields (physical abilities, external appearance, etc.) and at the same time their self-esteem is very high. The aforementioned findings show that the Greek educational system, as a significant element of the social-cultural environment of the immigrant students, does not affect their self-concept and thus does not exclude people with a different nationality from it, as this exclusion could have a detrimental social effect on the student and on the person as a whole (Jimerson et al. 2000, Portes & Rumbaut 2005, Thomson & Crul 2007, Tsakloglou & Papadopoulos 2002), as well as on his perception of his/her self-concept (Cooley & Ayres 1988, Tannenbaum 2008). There have been studies (Frementitis 2005, Hatziothantholou & Papadopoulos 2002), concerning Greece, which reflect a negative stance towards immigrants, even though immigrants who participate in the educational system of the country are treated in the same way as Greek students (Bessevegis 2008, Cristopoulou 2008).

Education is the first and perhaps the only institution which aids towards the inclusion of second generation immigrants within the country of establishment. Research in the U.S.A. has shown the significance and importance which this country attaches to education, especially the education of different nationalities. We must also stress the importance
immigrants themselves attach to their education in the aforementioned country (Suarez-Orozco 2002).

Boys seem to conceive more positively of themselves in areas which concern their achievements in mathematics, in their physical appearance and physical abilities and athletics, as well as in their relationships with other children of their own age, compared to girls. Our research is in line with other research conducted in this field (Giavrimis, 2005, Giavrimis et al. 2003, Hatzichristou & Hopf 1992) but the particular findings of this research show stereotypical perceptions which expect boys to be better than girls in maths and athletics (Paraskevopoulos 1985).

Younger children have a more positive conception of themselves in areas concerning their external appearance, their physical abilities and athletics, their school achievements, as well as their relationship with their parents, compared to older children. Older children, in an attempt to construct their identity and through a process of development, may face friction which may have repercussions in their relationships with the “others”. Children of this age group are going through a transitional phase within the educational system. Students pass from one cognitive level to the next, as well as from one class or school to another (primary school – junior high-school), where the structure and the demands of this level is different (Feldman 2008).

Low achievers also seem not to have a positive conception of themselves in the way they manage matters in areas such as relationships with other children of the same age, with their parents, in their school achievements and self-esteem. Children whose fathers’ have only finished primary school seem to have the lowest self-esteem compared to the other children, whereas children whose parents had a higher educational level seemed to have a better perception of their achievements at school. A mother’s educational level also seems to influence her child’s achievements at school. Children whose mother has only finished primary school have a lower self-concept of their school achievements compared to the other students. The educational level of both fathers’ and mothers’ also seems to influence their relationships and attitudes towards their children, as well as their upbringing. Research has shown correlations between a parent’s educational level and his child’s achievements at school, as well as its upbringing (Bourdieu & Passeron 1994, Fragoudaki 1985). The “cultural capital” of a family, becomes a decisive factor within the social and educational hierarchy (Bourdieu & Passeron 1994, Patereka 1986).

To round off, it would be safe to say that immigrant students have formed a functional identity of the “self”, irrespective of whether this is an academic identity or something else. Boys and smaller children conceptualize their abilities and dexterity as particular segments of their personalities. Their parents’ educational level also seems to influence their school achievements, as well as their relationship with other students and this includes their self-esteem. Research findings in this paper could be used within the framework of a model which would grant alternative psychological support to schools, and which would aid in the design and enforcement of interventional programmes which will aim at facilitating student’s adjustment in Greek Schools. The educational system, as a secondary factor, which influences socialization may support the formation of the “self” by remodeling its structures so as to verify and bring to prominence those special characteristics of a student which will afford him appropriate social and educational roles, as well as the appropriate educational and the necessary cultural background which are both prerequisites for their school success (D’Amato, 1993). Social and educational policy
should focus upon activities and processes through which the self-concept of the immigrant students will improve and through which social exclusion will be obliterated thus guiding humanity towards a society which respects both the 'other' as well as the intercultural relationships which exist within it.

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**Brief biographies**

**Panagiotis Giavrimis**
He is a Lecturer in the Department of Sociology in the University of the Aegean (Greece). Before that position he had worked as a teacher and school counsellor in primary public schools for 23 years. He currently teaches sociology of education in the Department of Sociology at the Aegean University.

**Vasilis Charitos**
He is a teacher in public elementary schools in Athens. He conducted his graduate studies in the field of Education at the University of Athens and he holds a Ph.D in intercultural studies from the Department of Educational and Social Policy at the University of Macedonia.

**Adamantios Papastamatis**
He is an Associate Professor in the Department of Educational and Social Policy, University of Macedonia, Greece. He also teaches in specialisation programmes in the University of Macedonia.

**Makrina Zafiri**
She has a Ph.D in First and Second Language Teaching from the University of Patra, she also has an MA in Theoretical and Applied Linguistics from the English Department of the Aristotle University of Thessaloniki, She currently works for the University of Thessaly in Volos as an ESP/EAP teacher.
Abstract
The conviction that the educational system reflects the interests of the ruling classes and serves their ideology, drives to the conclusion that any changes to the educational system derive from other general changes in the society, especially concerning the economy and the politics. As a result, the directions of the educational changes depend on the social forces, their power and their relation at any time. An example that has been ignored from the projects concerning the Greek educational system is the changes in the primary school, which took place between 1878 and 1880. The present project searches through the changes in the primary school at the period that has been preannounced, especially as far as the method of teaching, the structure and the contents of teaching and the level of teachers’ education are concerned. All these are related to the changes that took place and the demands that are formed in the society at that period. Such changes are the economic development and the need of improvement of the professional skills of the people through education, the political development and the need of improvement of the level of people’s education, in order to use rationally their political liberties and finally, the problems concerning ethnical issues and the need of reinforcing the ethnical conscience of the citizens.

Keywords: Primary Education, educational reform, society, politics, nation

Introduction
The educational institutions - as ideological state apparatuses - reflect the dominant ideology, serve the ambitions of the dominant social layers and contribute to the reproduction of power relations. This leads to the assumption that the changes in education derive from economic and social changes, political and social conflicts and changes that take place in the correlation of social forces, within the state. However, educational institutions do not reflect accurately the economic and social relations. On the contrary, they possess a degree of autonomy. This happens because historical and cultural factors and attitudes of teachers and students intervene with the configuration and operation of the educational institutions. Moreover, in the "dark box", which is the interaction between teachers and students in the classroom, there is always space in order students to come in touch with values and beliefs different from the dominant ones.

Finally, education, as a social institution, is influenced by the overall economic and social organization. Moreover, the educational changes are related to changes in the correlation of social forces.

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of social forces.

One example - overlooked in all of its dimensions by the studies in Modern Education - are the changes achieved in primary education during the years 1878 - 1880, when Greek state had already initiated changes in economic, social and political level.

The purpose of this article is to investigate the economic, social, political and national circumstances - during the third quarter of the 19th century - which "imposed" changes in primary education and correlate these circumstances with the views concerning education (which means the arguments of the Ministry of Education and of other persons and unions, who contributed to these changes).

The method used is historical – interpretive and comparative. It is used for observing the correlation between social reality on the one hand (economy, society, politics, etc.) and the educational institution and the views about educational changes on the other hand.

1. The primary education from 1834 to 1880.

Greek educational system was founded by the Bavarians between 1834 – 1837, with the transfer of European standards. Its basic characteristic was the classicist orientation. The law on primary education, which was providing long and compulsory education with theoretical and practical character, was not implemented. With the prevalence of "allilodidaktiki" method, the "compulsory" education was limited in duration and content, acquired this classicist orientation and was transformed into a basis for secondary education, serving the needs of those who would be enrolled in secondary education.

The structure of the educational system remained virtually the same until 1880. Most of the changes that took place (prohibition of teaching together boys and girls in elementary school in 1852, teaching of the grammar of ancient Greek language in elementary school in 1855, abolition of the Teachers’ School in 1864) constituted a conservative turn. These changes were adverse to a rational modernization of education, which should be oriented to the needs of life and to the economic development of the country. These changes expressed a romantic nationalism, the rise of which substituted the democratic nationalism, emanating from the Enlightenment.

The organization of primary school was based on the "allilodidaktiki" method until 1880. This method, except that it was considered economical and quick for somebody to learn the first letters, guaranteed absolute uniformity and consequent control of the educational process. Moreover, it achieved the acceptance of new forms of power within the national state.

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2 The "Nomos peri dimotikon scholion" ["Law on Primary Schools"], 6/18 Feb. 1834, provided a seven-year compulsory schooling and, in addition to theoretical courses, it provided practical agricultural courses or handicrafts (Articles 2-3, 6).

3 "Allilodidaktiki" was a method of organizing school, where older students were teaching to the younger ones. In English we can define it as "mutual learning method". The opposite of "allilodidaktiki" is "syndidaktiki" method, in which the teacher explains and transmits the new knowledge directly to students.


In 1864 I.P. Kokkonis, the promoter of the "allilodidakti" method, died. However, the use of this method will continue for one more period. In 1866 was organised a competition for writing a new Guide (manual). The committee of the competition approved the Guide of G. Constantinides, which was reissued in 1873. The adoption of "allilodidakti" method as the officially accepted teaching method for primary schools was the precondition for the republication of the Guide in 1873, despite the negative reviews that had already begun to circulate.

2 The reform of primary education.

A few years later (1879) the Ministry of Ecclesiastical Affairs and of Public Education changed its perspective and was expressed negatively for "allilodidaktiki" method. It consulted teachers to reject this mechanistic teaching method and to adopt a simple and natural one. A teaching method, in which knowledge and experiences will be pleasurably transmitted to students, who will understand the teaching contents and the moral will of the students will be shaped. The reason for the change of the ministry's attitude towards the method was the findings of special inspectors who were sent to observe school classes. According to their findings, memorization was causing the ineffectiveness of education, concerning the cultivation of national spirit and of religious feeling. However, the findings of the inspectors were only an excuse. The main reason for the change of the ministry's attitude was the already taken decision to reform primary education.

An essential prerequisite for achieving educational changes was the preparation of teachers. Thus, a year ago, in 1878, the new Teachers' School, which trained future teachers in a new teaching method, was established. One year later (1880) "allilodidaktiki" method was abolished and a new teaching method, called "syndidaktiki" was introduced. Moreover, the primary school was transformed into a school of four years of attendance.

So, we have some settings – teachers’ education (1878), changing of the teaching method (1880) – which contribute to the reform of primary education.

Now, criticism to "allilodidaktiki" method will be more direct and harsh. In a following instruction from the ministry to prefects, we can read that the old method rendered the same the aim of education invalid. How could a teacher educate students and mould their personality with the help of children which were responsible for the guidance of the younger students?

Curriculum and training of the already working teachers also needed in order the reform of the school to be completed. Thus, the practical guidelines for teachers, written by M.

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7 Egk. no. 7639, Sept. 12th 1879, "Peri diorthoseos ton plimelion en ti didaskalia" ["On the correction of deficiencies in teaching"].
10 Egk. no. 7639, ibid.
Petridis, inspector of primary schools, were adopted as the official curriculum, as they included the purpose of education, the purpose and the contents of the courses, guidelines for teaching and curriculum for the four-level primary school. For the internal order of the school, the duties of teachers and the behavior of students, teachers should take notice of the instructions of Moraitis S., which were included in "Didaskaliki".

Although training of the already working teachers in the new method was provided by Royal Decree in 1881, it took place three years later, in 1884. Moreover, due to huge demand for teachers, deriving from the new organisation of schools – three new Teachers' Schools were established: The Teachers' School of Peloponnese, of Ionian Islands and of Thessaly.

3. The legislative mobility in period 1870-1880.

We notice, therefore, that a change in primary education was taking place. However, the legislation concerning the changes on primary education was not an unexpected event. During the decade 1870-1880 several bills, which were trying the reform of the basic education, were submitted in the Parliament. In 1870 the minister G. Vakalopoulos proposed to the Parliament bills that provided Kindergarten of two years of attendance and Primary School of six years of attendance. In 1874, the minister I. Valasopoulos submitted a bill, which proposed the inclusion of primary schools in the Church. In 1877, the bill of G. Milisis proposed the organisation of school levels in this way: "Grammatoscholio": 3 years, Primary School: 4 years and "Astiko school": 6 years, depending on the size and occupational stratification of the population of each place. The same project was also proposed by the ministers Deligiannis (1877) and Augerinos (1880). All these bills proposed the change of the structure of primary school, but also included provisions for the education or qualifications of teachers. The establishment of the new Teachers’ Schools, the change of the teaching method and of the school organisation and the training of men and women teachers in the new method were three of the many statutes of this period, which were enacted or adopted and implemented.

4. Collective activities and demand for educational reform.

The educational bills and changes to primary education were promoted in a climate of
collective movements, unprecedented for the Greek society. A number of associations were acting to help to the improvement of educational attainments of people and often suggested or implemented changes to the existing educational system.

Between the years 1865 and 1874 were established the following associations: "Athinaion", the members of which were freely teaching lessons of their own choice, "Didaskaliki Adelfotita" ["Brotherhood of Teachers"], the first teachers' organization, aiming to the improvement of the teaching and to the nursing of its members, the Literary Association "Parnassos", which founded schools for Poor Children in Athens, Corfu, Kalamata, Syros, Thebes, Chalkis, "Eteria filon tou laou" ["Society of the Friends of the People"] in order to educate working classes through organizing lessons, printing books and establishing libraries. However, through its action, it intended to discipline people. In 1869 it published a book (Egkolpion tou ergatikou laou i symvoule pros tous chironaktas [Handbook of labor people or advices to manual workers], Athens: Lazaros D. Villaras, 1869) with advices to workers to be working and prudent, not to resort to strikes and not be affected by catastrophic outlandish ideas. In 1869 was founded the "Syllogos pros Diadosin ton Ellinikon Grammaton" ["Association for Dissemination of Greek Letters"]. It tried to achieve its purpose by establishing schools and by writing, publishing and distributing useful books. In 1872 was founded the "Syllogos kyron pros gynekian pedeuisin" ["Association of ladies for female education"]. Its purpose was to establish educational institutions for poor girls, to publish books, to train nurses and maids, to establish laboratories for poor women.

Next year (1873) was established the "Hellenic Didaskalikos Syllogos" ["Greek Teachers’ Association"], in which participated teachers of all levels. Its purposes were: a) the amelioration of education, b) the foundation of a Teachers’ School and c) the economic help to the outgoing members of the association due to their old age or illness. In 1874 was founded the "Filanthropiki Eteria" ["Benevolent Society"] in Piraeus, aiming to establish a school called "Pedagogion", for orphans and destitute children.

Such associations had been established in many enslaved Greek areas. Here we confine ourselves to present the educational activity of some of these associations, which acted within the state and contributed to the maturation and realization of educational changes in period 1878-1880.

Aiming to contribute to the improvement of education, the "Syllogos pros Diadosin ton Ellinikon Grammaton" ["Association for Dissemination of Greek Letters"] announced a series of competitions. The theme of the competitions were the condition of education, means to correct the deficiencies, language teaching, books, teaching methodology and education of teachers. The proposals made on these themes were actually trying to develop a proposal for educational reform. The first competition resulted in proposals for the organisation of education and the language teaching. Some of the proposals which saw the light in that period and referred to the reorganisation of education and language teaching were created due to the competitions of this association.

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17 (1869) O Pros Diadosin ton Ellinikon Grammaton Syllogos ["The Association for Dissemination of Greek Letters"], Programma Diagonismou peri tis Ellinikis Glossis, [Program of a Competition on the Greek Language], pp. α-β.
18 Mavrocordatos, D., (1872) Ypomnimation peri ekpedeuseos tou laou [Proposal on education of the people].
The other major activity of this association was to finance youths to do pedagogical studies in Germany. The main aim was to be educated the young teachers who would manage the Teachers’ School, which was about to be established. The need for renewal of the educational institutions drove the persons who were trying it again to Europe, in search of patterns.

Thus, the Association sent Sp. Moraitis, P. Economou and Ch. Papamarkou (who all had won in a competition), in Germany for pedagogical studies. After their return, the three scholars published educational texts, tested the new method in practice and trained the first teachers at the expense of the Association. This happened in the "Pedagogio" of Piraeus and in the Teachers’ School of Thessaloniki. The whole offer of this Association and of its scholars in primary education was important and supported the decisions of the state.

Another association that also tried to influence state educational policy was the "Hellenic Didaskalikos Syllogos" ["Greek Teachers’ Association"]. In public discussions of this association, the subjects of teachers’ education and teaching method were dominant for many years. The establishment of a Teachers’ School thought to be the only way to render teachers qualified. As a result, the method could become more pedagogical and school courses could exceed. In the meeting proceedings of the association and its committees were published their decisions concerning the education of the teachers. The same association launched competitions for writing children's books, held discussions and established study committees, in order to research on the teaching methods and the teaching of specific courses.

The action of the associations presented above and the overall action of all associations promoted an educational change.

Therefore, the changes in primary school are not simply the result of the legislative mobility of the decade 1870-1880. On the contrary, both the legislative mobility and the educational changes were affected by collective educational initiatives and demands expressed by the middle social class (which established the associations) and by a part of intellectuals. Thus, it should not be considered surprising that educational changes coincide with the expressed views of the associations or even with the successful implementation of educational initiatives.

\[\text{Greece 1878-1880}\]

\(\text{Christos Tzikas: The social conditions of educational changes. The case of primary education in}\)

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5. The socio-economic developments and the views about education

Which, however, are the socioeconomic conditions, under which requests and attempts for an educational change were formed? And which are the needs that these conditions posed and education had to serve?

In the third quarter of 19th century the signs of the changes that were occurring in the greek social formation were obvious. The agricultural development and the transition from self-consuming in merchant production were achieved during the decades 1850 to 1870, through the expansion of the export-oriented agricultural production.

The state showed stronger interest for agriculture, by establishing new institutions in order to strengthen and enhance it, such as Agricultural Councils and Agricultural Companies23. Moreover, the state facilitated the import or manufacturing of agricultural tools24. Finally, in 1871, the distribution of national land took place25. This means that the small farming lot will remain the dominant model, but there was opened the way for the transmission of the land into a saleable commodity, for the increase of the borrowing capacity of farmers and for the improvement of the production.

Although not all of these efforts were successful, the final result was positive. The production of grapes, from 57 million "Enetikes litres" in 1851, exceeded 150 million in 1871. The cotton output in 1850 was just 400 tons, while in 1864 came to 5.250 tons. Tobacco production, estimated at 767.000 "okades" in 1856, it reached 3.650.000 "okades"26 in 187627.

These developments led to the expansion of the transport system. From 1870 to 1880 were constructed more than 2.600 km of vehicular roads, not counting here the roads of Cyclades and Ionian islands28. Sea transport was also developed, by the transformation of the sailboats into steamboats29. Moreover, in this period (1870-1880) was initiated the design or implementation of major infrastructure projects, such as the opening of the Canal of Korinthos, the construction of the railroad and the drainage of the lake Copais.

These conditions created the prerequisites for industrial development. In the decade of 1870, the first mobilization of human work and financial resources from agricultural to industrial sector took place. Between 1868 and 1875 we can locate what has been symbolically named "the takeoff" of the greek industry. In 1868, the units that could be industrial sector took place. Between 1868 and 1875 we can locate what has been symbolically named "the takeoff" of the greek industry. In 1868, the units that could be

26 "Enetiti litra" and "oka" were means of measurement.
used the steam. Finally, the number of industrial workers increased from 1,000 in 1867 to 5,000 in 1875. The process of economic transformation was associated with the inflow of funds to Greece. In 1870, part of the capital of the Greek bourgeoisie in the Balkans and Russia began to flow and be invested in the country, mainly in trade, shipping and banking, namely the tertiary sector, where they could collaborate rather than compete with Western powers.

The population of the cities also increased. During a decade, Athens increased the population per one third (from 44,510 inhabitants in 1870 to 63,374 in 1879) and Piraeus doubled it (from 10,963 to 21,055). The number of inhabitants in Patras increased from 19,641 to 25,494 and in Tripoli from 7,020 to 10,057. Less growth took place in other cities, while the population remained virtually unchanged in Ermoupoli and Corfu. In 1879 urban population was the 28% of the total population of the country, while in 1853 was only the 8%.

However, how did the opinions supporting changes in education reflected the relation between educational changes on the one hand and new economic situation on the other hand?

Firstly, we must note that in the debate – which took place that period- concerning the development of the decades 1860 and 1870, was often underlined (along with the request for improvement of the economy) the neglect of transmitting agricultural and technical knowledge to youth through education and the need of inserting more practical knowledge in curricula. Moreover, the purpose of the school expanded and included, apart from the moral and religious education, the acquiring of knowledge useful for the production. So, for first time, education was related with economy. The new citizen should be educated both as a member of the Church and society and as an able worker with a basic body of knowledge concerning his job. Furthermore, "Odigies" of Petridis include in the purpose of school the shift to the practical needs of life, apart from the moral, religious and national education in school.

Such an expanded and oriented to economic needs purpose of school had been already posed by intellectuals and collective bodies. In the committee’s report of 1872, on the competition of the "Syllogos pros Diadosin ton Ellinikon Grammaton" ["Association for Dissemination of Greek Letters"], we can read that the purpose of education is not the teaching of the children and the teaching of useful and practical knowledge. The

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30 Agriantoni, C., (1986), ibid, pp. 111-112, 117-118. Svoronos estimates that the total number of factories augmented from 168 (1867) to 199 (1874) and industrial workers reached the number of 7300 in 1870. Svoronos, N., 1988, Episkopisi tis neoeellnikis Istorias [Review of Modern Greek History, Athens: Themelio], pp.101-102, apparently involving to his measurement smaller production units. Statistics of that period calculate that the industrial units were 765, including perhaps any labs, Demathas, N., 1876, "Peri vioichianikis proodou en Elladi" ["On the industrial progress in Greece"] in: Attiko Imerologion [Attic Calendar] 1877, Athens: Ed. Eir. Asopiou, pp. 409-427).


34 Ekg. no. 7876, ibid.

35 Petridis, D. (1881), ibid, p. 4.
same year was published the "Egchiridon stixiodon gnoseon ek ton epistimon, ton technon kai tis viomichanias, pros chrisin ton par imin proartarktikon scholeion" ["Manual of fundamental knowledge of science, arts and industry, for preparatory schools"], translated by M. Lambrou, and it met the approval of the same Association\textsuperscript{36}.

The ministry accepted that there was a period when the transmission of the minimum knowledge mechanically to children was enough for them, to face the needs of life. But in last decades of 19\textsuperscript{th} century this condition changed. Under the new economic and social conditions of global competition, when the findings of natural sciences begun to be applied in production, the school had to provide students with strong spiritual and moral skills and to enable the country to keep up with other developed countries\textsuperscript{37}. Thus, the views of collective bodies and of the ministry of education, concerning the turn of education to the provision of knowledge useful in production, reflect the need for the country to keep up with the international situation.

So, in this period were taken measures such as examinations for admission to the level of "Greek" school\textsuperscript{38}, strict internal and graduation examinations in middle education\textsuperscript{39} and educational fees\textsuperscript{40}. These measures aimed to control the flow of students to the superior general education and university. The establishment of professional schools, such as schools for sailors, naval officers, telegraphers, farmers, etc. from 1867 onwards\textsuperscript{41}, aimed to turn the student population to technical education.

Apparently, a technocratic approach to formal and informal views about education begun to be obvious in this period. These perceptions, however, did not only coexist with ethnocentric cultural perceptions concerning the role of education, but were overlapped by them.

\section{The modernization of the political system and views about education}

Despite the fact that statistics of 19th century disagree, it is certain that in the decade of 1870 the image of the country begins to change. Cities grow, and new bourgeois social layers appear. These layers are seeking for a different political context within which to express themselves.

The political change of 1862 created the conditions which enabled bourgeois and lower social classes to be the legitimizing basis of the political system in which the king reigns.

\begin{thebibliography}{9}
\item Egk. no. 7876, ibid.
\item Royal Decree August 26\textsuperscript{th}, 1867 "Peri doimastirion exetaseon dia tin is ta Ellinika scholeia paradochini mathitoun" ["On testing examinations for introduction of students in Greek schools"], in: Venthylos, G., (1884) \textit{Themologion tis Dimotitikes Ekpedeuseos [Themologion of Primary Schools]}, (Athens: Vlastos), p. 80.
\item Royal Decree May 11\textsuperscript{th}, 1884 "Peri egrafis kai exetaseon mathitoun en tis ekpedeurtirias tis mesis ekpedeuseos" ["On the registration and examination of students in Middle Education Schools"], \textit{Government Gazette} 199, May 17\textsuperscript{th}, 1884.
\item Law AXKE, December 30\textsuperscript{th}, 1887, "Peri telon chartosimou" ["On stump duty"] \textit{Government Gazette}, no. 2, January 4\textsuperscript{th}, 1888.
\end{thebibliography}
and the people - through their representatives – rule. However, the intervention of the king in political life by appointing minority governments and riots that took place in that period (called "stilitika") led to unrest and pressure from bourgeois forces for modernization of the political system. In 1875 was established the "archi tis dedilomenis" (1875), the application of which increased the dependence of government on parliament. In 1877 was promoted the universal suffrage (1877).

Thus, during this period, a tendency for stabilization of the political context was appeared and the conditions for the action of liberal forces in the political arena of the country were created. The main exponent of these forces was Charilaos Trikoupis. The transition of the political system to a two-party system was considered a political modernization. The two prevailing parties had ideological contrasts: one party, Deligiannis's party, expressed the old conservative families and the system of political client. The other party, Trikoupis's party, attempted to rationalize the institutions and to establish a state governed by laws. It expressed the urban strata that appeared during this period and were getting more and more enhanced.

The establishment of the "archi tis dedilomenis" and of universal suffrage facilitated urban strata not only to be represented through elections, but also to acquire political power. However, all citizens had to make "rational" use of their political rights. This is the point where the school had to play a serious role.

On the one hand, people needed to understand the functioning of the state institutions, the rights and duties of citizenship and to escape from political patronage. On the other hand, they should be integrated, they should accept and not confront the political and social system.

In 1865, G. Papadopoulos had already written that it is compulsory to be included in primary education basic and simple knowledge on civil and political obligations of the citizens and on the organization of the state. The journal of the Teachers' Association "Plato" hosted an extensive article written by Kazazis, Professor of University, titled "Dimotiki pedeusis kai katholiki psifoforia" ["Primary education and universal suffrage"]. Education is, on one point of view, a mechanism for achieving consensual integration of citizens, but, on the other, the knowledge that students acquire offers to them the right of civic participation, through voting. Universal suffrage without education becomes an organ of damage. Those who are aware of the social problems and do not feel their social responsibility, can easily be manipulated or swap their votes for personal benefits. Therefore, education of citizens is a key issue for the proper use of voting rights and civil liberties. Since education is the necessary precondition for the function of democracy and

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43 "Archi tis dedilomenis" is a principle according to which the king instructs the party which occupied the first position in the elections to form a government.
46 Svoronos, 1988, ibid, p. 102.
the participation of the citizens, the state is entitled to compel people to attend primary school. Finally, Kazazis suggests the prohibition of the right of voting to everyone who does not know reading and writing because when much of the population does not know writing and reading is incapable of thinking and is totally away from civilization and progress. Complete liberalization will inevitably provoke destruction. The expansion and improvement of primary education is directly related with the "proper" use of political freedoms. According to an instruction of the Ministry of Education, there was a period when farmers, labourers and merchants did not have civil rights. But now, knowledge is essential to production and also moral and spiritual skills, which are offered through education, are necessary for right use of the political freedom and participation to public issues. Moreover, the new curriculum contained elements of civic education, along with elements of culture. The most important of them was the knowledge concerning the political system and the powers of the State.

7. The aesthetic and linguistic reorientation and the views about education

The decade 1870-1880 is a turning point for a part of the intellectual and cultural life in Greece. Although a direct relationship of the intellectual and cultural life with the settings in education is not apparent, however, it is part of the canvas on which views about education are formed. The decline of Romanticism, the birth of the folklore science, the support to the vernacular language, the emergence of the New Athenian School and the wider shift in contemporary greek culture are few of the signs of the incipient change in the cultural and aesthetic level.

In 1871 was published the work of N. Politis "Meleti epi tou viou ton neoteron Ellinon" ["Study on life of modern Greeks"], which will mark a turn to the study of modern greek culture. In 1873 and 1875 N. Konemenos published the projects "To zitima tis glossas" ["The language issue"] and "Kai pale peri glossas" ["Again concerning language"], defending the vernacular language. The judgments and awards for poetry competitions after 1873 reflect anti-romanticism and contribute to the shaping of the climate for the renewal of the literature.

In 1876 begun the publication of literary magazines, such as "Estia" ["Fireplace"] (1876), "Rampagas" (1878), "Mi xanesai" ["Do not get lost"] (1880). These magazines represented the literature of the new period, of the "Generation of 1880". In fact, a new phase of the controversy concerning language was starting. This 'language movement' did not yet have direct impact on education. The Ministry of Education in this period was contrary to any shift towards vernacular language. According to the "Odigies" ["Directives"] of D. Petridis, the Bible and the Iliad by translation were defined as course books, while the grammar proposed was the grammar of

49 Egk. no. 7876, ibid.
50 Petridis, ibid, pp. 98-99.
"kathareuousa" ("the language of scholars")\textsuperscript{53}. However, a shift towards modern Greek culture and language begun to be distinguished. In the opinions of many scholars was observed a shift from the ideal of resurrection of the ancient language towards the use of "kathareuousa". Trikoupis reportedly stated to poet Malakassis: "\textit{Time along with scientific effort affect the development of a language, according to the circumstances and needs}\textsuperscript{54}.

The authors of the essays in the competition for language teaching (which was organized by the "\textit{Syllogos pros Diadosin ton Ellinikon Grammaton}" [Association for the Dissemination of Greek Letters]), proposed the simplification of the language and distinguished the ancient language from the "new" one, which was probably a mild form of "kathareuousa". "\textit{Zografio}" Teachers' School and "\textit{Zarifio}" Teachers' School, which were established with the responsibility of the "\textit{Ellinikos Filologikos Syllogos Constantinoupoleos}" [Hellenic Literary Association of Constantinople], had established two model primary schools. The purpose of teaching the language course in these model primary schools was the adequate understanding of the official language by the student and the acquaintance of the capacities of speaking and writing, using this language\textsuperscript{55}.

Matthew Paranikas, committee member of the same association, wrote the rules and curricula of the Teachers' Schools and model schools. In one of his speeches to the Association, he proposed the teaching of modern literature along with the teaching of the ancient one: the studying of modern authors like Melas, Goudas, Trikoupis, Paparrigopoulos, etc. \textit{should be introduced in middle schools}. In poetry he proposes even vernacular language: "\textit{In poetry we can teach Soutsos, Zalokostas and others along with Homer. We can also teach Zampelios, Valaoritis, Vernardakis, Vlachos along with tragic poets and, finally, Solomos, Ragavis, Zalokostas, Christopoulos and many others along with opera. We can propose the reading and memorising of the best of folk songs}\textsuperscript{56}.

The educational bill "\textit{Peri Dimotikis kai Gymnasiakis Pedeuseos}" ["On Primary and Middle Education"], which was written by G. Milisis, proposed the teaching of modern Greek language in the 4-classes primary school and in the 6-classes "\textit{astiko}" school. Moreover, Modern Greek language was proposed to be taught in Middle Education, per two hours a week, to all of the six high school classes\textsuperscript{57}.

According to the notice for the school textbooks in 1882, the texts for reading, for the third class of primary school, should be able to make a strong impression on the soul of the child, through vivid descriptions taken from the nature, from the history and from the folk poetry\textsuperscript{58}. Finally, the curriculum of the "\textit{Greek}" school in 1884 included the teaching

\textsuperscript{53} Petridis, ibid, pp. 62-65.


\textsuperscript{58} (1882) [\textit{Prokritis}], "\textit{Peri teleseos diaigonismou pros syntaxin didaktikon vivlion tis mesis kai katoteras ekpedeuseos}" ["On the realization of a competition for writing textbooks for the middle and primary education"], November 23\textsuperscript{rd}. 
of texts of modern writers and poets of 18th and 19th century, such as Theotokis, Voulgaris, Koraïs, Trikoupis, Peraïos. It also included the teaching of poets of the mature Romanticism and also poets like Zalokostas and authors of the "era of transition", such as A. Paraschos, Vikelas and even Valaoritis. However, the texts chosen were always written in "kathareuousa". Only in the manual "Modern Greek Readings", written by G. Drosinis - G. Kasdonis, were carefully included a few "kleftika" ("thieving") folk songs.59 The "shift" from Romanticism to realism and to vivid language (even if it was the "kathareuousa") and the shift of education towards the needs of life are simultaneous phenomena. They are both related to the strengthening of the bourgeoisie and the development of a bourgeois society. This "shift" does not mean removal from the standards of the classical antiquity. According to intellectuals like Kazazis60 and Pamamarkou61, the revival of the genuine spirit of antiquity and the Greek education are the basic foundations of education.

8. The national issue and the views about education

Mobility in educational issues in the decade 1870-1880 must be associated with the impasse of the national issue. Every aspect of political and social life was related to "Great Idea", which occupied a central position in Greek society during 19th century. "Great Idea" connected most of the Greeks or Greek-speaking Orthodox people, inside and outside the Greek state. However, the precise meaning, the content and implementation progress of the "Great Idea" varied and were related, each time, to international circumstances and to political and social forces that dominated within the social formation. From the third quarter of 19th century, along with the emergence of new bourgeois forces, the perception that economic growth is a prerequisite for resolving the national issue started to gain ground.

After the Crimean War, the national issue comes into a new phase. However, 1870 was a turning point. The disappointment derived from the failure of the Cretan revolution was followed by the recognition of the Bulgarian Exarchate and the establishment of an autonomous Bulgarian state and, thus, the emergence of a strong opposing nationalism in Balkans. The doctrine of "ellinotheromanismos" supported that the peaceful coexistence with the Ottoman Empire, the power of Greek intellectual tradition and the economic influence of Greek merchants who lived outside the Greek state were the best means to transform the Ottoman Empire, to address rival nationalisms and to defense national interests. This doctrine did not last for a long way in the Greek state62. From 1875, a new crisis in the

Balkans resulted in the Russian-Turkish war and the Treaty of San Stefano and highlighted the Macedonian issue as a major national issue. Despite the official neutrality, that Greek governments followed, Greece took only the minimum benefits at the Congress of Berlin. All these lead to frustration and bitterness, caused protests, ideological hardness in society, intensity of rivalry in the Balkans, need for national readiness and systematic organisation of the army.

In opinions for education, expressed in that period, the Greek culture, the brilliant Greek history, the national homogenization and the national uplift occupy prominent position. "Allilodidaktiki" method had failed to form a strong national sentiment, as it provoked sedation of the religious feeling and depression of the national spirit63.

The minister of Education A. Avgerinos, in the explanatory memorandum of the educational bills concerning primary education, gives special attention to national homogenization. He believes that education is the cohesive power of modern societies and the mysterious laboratory of modern nations. It is the force that unites many different peoples in a single compact national organization64.

The formation of an enthusiastic patriot needed most profound influence that could be achieved through educational contact, through direct contact between students and teachers. In "Elementary Practical Directives..." of D. Petridis are consistently repeated expressions such as "Through awareness of the greatness and the glory of their ancestors, they become good men, obeying to laws and characterized by restless activity, bravery and high morale, from which stems the contempt for material wealth and for death towards freedom and duty (...). Overall conclusion of this instruction is that each individual must contribute to the happiness and glory of the nation, in which all goods are enclosed"65.

9. The ideology throughout views for education

The educational changes during the years 1878-1880 were referred to the education of the people and aimed to shape the "new" citizen and serve the basic social needs, created by the new circumstances.

The "new" citizen could no longer be shaped by mechanical transfer of basic knowledge. On the contrary, the "new" citizen should be morally affected and become conscious member of the society. He must improve production by implementing the findings of

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63 Petrides, ibid, pp. 101-102.
science, make the economy competitive and become a supporter of national ideals. Moreover, the power relations in society should be accepted by consensus. Until now these relations were directly imposed. However, now, discipline, acceptance of the dominant ideology and ensure of social cohesion will take place through "kivernitiki" (regulation of school space, time and behavior of students), through "kyrios agogi" [main education] (model of a good teacher and direct relationship between teachers and students) and through teaching. Now, students should actively internalize values, standards and the dominant perception of the organization of the society, through the new pedagogical process.

The point that the capacity of the lower social strata to participate in electoral process should be ensured, requires the social and ideological integration of these lower social strata, through education. This means that lower social layers have to accept the class division of the society and their own social position. Kazazis, in the article mentioned above, argues that "universal suffrage without education, without citizens having the same conscience (...) and dominance of the absolute democratic idea, which is a consequence of the materialist theory, means danger not only for culture, art, science, but for the whole society". In his explanatory report on the educational bills that he brought in parliament (1880), the minister of education A. Avgerinos writes: "It has been supported that, freedom and universal suffrage without education lead to anarchy and destruction", because people at school learn "that collective and individual interests of each person are fulfilled when freedom goes along with tranquility". Only in schools we can find the ideal of equality. In schools selfish spirit is limited while modest spirit, due to poverty or other cause, is congratulated. Only in schools there is no distinction based on origin or wealth and the child learns tolerate the moral or spiritual superiority.

Thus, citizens learn - since they were students - that differences in social status are not due to social determinations, but due to individual differences and innate capacities. Therefore, they must accept class differences.

In that period, social stratification was redeployed (which means emergence of new bourgeois and working social layers), while ideas of equality had begun to circulate and strikes to take place. That time a major challenge was the ideological integration of the masses and the maintenance of the social cohesion. This would happen if lower social classes would accept their position as a "natural" state. The Minister of Education, A. Avgerinos ascribes political and social importance to education, in the educational bills mentioned above. He fears that through emancipation of the large and poor social classes and prevalence of the principle of universal suffrage, inequality in wealth and intellectual development in favor of the upper social classes can crack the social body, something that is not harmless without the help of education. Having apparently taking into account the example of the Commune of Paris, the minister added: "the bad results of this terrible danger have began to appear in other countries". Education, however, is a bulwark against threats to social status and ensures social harmony and cohesion.

The unifying power of the system of social stratification (which allows the formation of a unified consciousness of a whole, in which all participate "equally"), is the faith and the

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66 Kazazis, ibid, p. 76.
67 Avgerinos, ibid, p. υλστ΄.
68 In 1872 the history of the Commune of Paris had been published by K. Stavridis, (Stavridis 1872).
69 Avgerinos, ibid.
devotion to the national homeland. This ideology must, above all, be cultivated in school, because this ideology renders the nation stronger and, of course, maintains the current social system.

According to "Odigies" [Directives] of Petridis, children must understand that the duty towards society and homeland and the glory that follows the fulfillment of this duty is a common feat of all citizens, of each social class. In this way is cultivated to children the love for homeland and for common good and there are generated moral relations between citizens, which are the power of the nation.70

Education had to play an important role in achieving these goals. The whole project, however, should be invested with neutrality, which conceals the social dimensions of the organisation and operation of education. This could only be achieved by scientific objectivity, i.e. a pedagogical method that would result from scientific research into human development and ensure objective results in the minds of students.

One of the promoters of the new pedagogical method gives us its potential. This is the director of the Teachers’ School, S. Moraitis, who taught and first applied Herbart’s teaching method. In his speech, in the first examinations of the Teachers’ School, he argued that, apart from the external organization and administration of the class, teacher, by using the new method, learns the purpose of human life and the process of man’s perfection. Teacher also learns which of the physical and spiritual forces can be trained and in which way they should be exercised, what kind of exercises and means should be used and at what age can these forces be exercised, in order the purpose of human to be achieved.71 Moreover, he believes that the new method was asked for as salvation from illiteracy and its consequences.72

So, we talk about a pedagogical method that had a specific purpose (establishing ethical will), a scientific background (the “parastatiki” psychology), a procedure (stages) and tools (supervision and evolving dialogue). This was Herbart’s pedagogical method, which was expected to form the citizen who would respond to the new economic, social, political and national conditions of the country.

10. Conclusion

Closing the outline of the development of certain aspects of Greek society in the transition from the third to the fourth quarter of the nineteenth century and the correlation between these developments and the prevalent views concerning education, we understand that the new economic and sociopolitical conditions that were shaping required a different type of citizen, as well as a different way of integrating population to the dominant ideology.

The arguments of the ministry of education, of intellectuals and authorities as far as the need for a reform of education concerns, were based on socioeconomic and political changes that were occurring in the greek state.

However, the reorganisation of primary education and the introduction of Herbart’s method did not resolve the educational issue, did not virtually turn primary education in
preparing students for facing the necessities of life. The westernized concepts for education based on science and for use of these concepts in production interwoven with notions of the unbroken continuity of the nation, the uniqueness of Greek culture and Orthodoxy. The last perceptions were related to the national issue, to the strengthening of the national identity and to the confrontation with the Balkan nationalism. Liberal ideas and values of the early 19th century had been weakened since the mid-century and their relations with antiquity had transformed them into a fertile love for ancients. The condition of the schools continued to present a gloomy picture because an important issue, the funding of schools, remained unresolved. Many features of education, such as verbosity that was cultivated by "allilodidakti" method, would remain its permanent characteristics. Language teaching would remain dominant at all levels of education and later would become the main issue which ruptured society, as there were different conceptions for language and education. The argument that continuing the studies in classical secondary education was the best way for upward social mobility for all social classes remained strong.

So, we see that education is related both with production and dominant ideology. However, it is not directly connected with economic needs and interests of the ruling classes, but is mediated by history and characteristics of the social formation, social and political conflicts. At that time, intellectuals, the new urban social layers and the political forces that represented them played the major role in an attempt to change education. In the last two decades of the century, the continuing changing of two parties in government, (the party of Deligiannis, which expressed old perceptions and preserved the political system of clienteles, and the party of Trikoupis, which attempted to rationalize the institutions and establish a bourgeois state, based on law) did not allow sovereignty of the newly minted urban strata at the political level.

Thus, the views about education would not find full implementation in practice. Education would continue to serve the dominant ideology, the discipline of the young members of the society and the cultivation of the religious and national conscience, through putting emphasis on the brilliant - especially at language level- ancient and Christian past.

Christos Tzikas is an Associate Professor in the Department of Primary Education, in Aristotle University of Thessaloniki. He teaches History of Pedagogy and History of Modern Greek Education at both undergraduate and postgraduate level. He has published books and articles of relative subjects and his interests focus on the relationship of educational institutions to the social and political conditions, local educational history and the gender dimension in education. He has supervised MA and PhD dissertations.