

# Social and Moral Values Through Information and Communication Technologies in Primary School

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**Abstract:** The purpose of this paper is to investigate the connection between the teaching of Information and Communications Technologies (ICT) in primary school and the development of pupils' social and moral values. The examination will be done by researching the cognitive objectives of the ICT course, their teaching methodology and moreover the context of how the course is organized. The latter will examine both the contribution of the teaching room and available computer equipment, as well as the contribution of the attitude and behavior of the teacher.

Considering that there is indeed a dynamic in the relationship between ICT teaching and the promotion of social and moral values, the work aspires to highlight and strengthen it. It aims to emphasize to fellow teachers the peculiarities of the course and the possibilities for the social development of students and the promotion of their social and moral values through the specific subject.

**Key words:** social values, moral values, development, ICT

## 1. Introduction

The subject of the present paper is the examination of the development of social and moral values through the teaching of Information and Communication Technologies (ICT) in the Hellenic (Greek) primary school. The work is affiliated with the general framework of the "Issue of the Social Values Development in Education" and its purpose is to focus on the subject of ICT. In the literature (mainly international) many articles deal with ethics and moral codes around computers, their networks, their applications and the material they distribute, but leave aside the aspect of the teaching of ethics, social and moral values.

Social and moral values, since they are not the subject of ICT, are examined if they could nevertheless be promoted and developed through them, and also through the teachers' attitudes, the organizational framework of the lesson and the social behavior rules that students are expected to follow.

The aim is, therefore, to examine the promotion of social values through ICT teaching and this will be achieved by answering the following questions:

- 1) Can the teaching of social values be achieved through the teaching of ICT in Primary School?
- 2) Are there special methods in order to integrate the development of social and moral values in ICT teaching?

The research work towards answers of the above questions, begins with a report and presentation of social and

moral values, school socialization and in general the way values can be “taught” to students in the modern school. Following learning theories are examined, in education generally and in the subject of ICT particularly. Finally, trying to answer the above questions, the structure of the ICT teaching process is analyzed.

## **2. Social and Moral Values**

Social and moral values of each society express the majority's perception of morality, the rules, what is good or bad, acceptable as behavior, moral or reprehensible. According to the school textbook of Political Education in High School “Social values express the real and deeper needs of society. They are a fundamental component of the cohesion and progress of societies. They are consolidated into general principles and ideas that guide and guide society and individuals. They influence our beliefs and function as guidelines for the evaluation of ourselves and others” (Μάραντος, 2014).

Social values that characterize each person guide almost every his/her daily action and determine its smooth or not adaptation in the society. Thus, human behavior, is guided by social values which for each society and each historical moment differ, are renewed, are accepted or rejected (circumvented). Having in mind the perspective that values are creations of human act and cultural evolution, values are not considered (examined) as absolute laws. In this way, the social and historical context in which they appear and evolve is projected (Αχλης, 1996).

The terms “rules”, “attitudes” and “acceptable behavior” are often used interchangeably with the concept of “social values”. It is understood that there is a difficulty in clarifying term “values”, as this term includes a vagueness and fluidness, which makes it difficult to define it clearly and intensifies its arbitrary use at the verbal level (Βώρος, 1997). In any case, the examination of social values hereinafter in the text will be sought and consider in relation to school socialization.

## **3. School Socialization**

The role that schools serves is complex, as it is expected to fulfill more than just providing knowledge and education to students in various subjects. One of the main components of the education provided by today's school is the care for the proper socialization of children. A basic dimension of a child's socialization is the development of the child's ability to morally evaluate his own behavior, but also that of others (Γωνιδά, 2015). Moral values constitute a subset of social values, which represent the strongest and most fundamental motivating factor of human behavior. Provided that values are stable, strong, and reasonably grounded, they are able to guide social behavior, guide action, shape opinions, judgments, and play an important role in planning and decision making (Straughan & Wrigley, 1980).

Each person acquires its social values through the socialization bodies in which exists from the first moment of its life. The main bodies of socialization are both family and school, that is, where takes place a lasting social relationship, having as a result the social values that govern these bodies to be transferred to persons and determine their human behavior and oblige people to harmonize with law and ethics (Αχλης, 1996).

Beyond family, school holds the most significant role as a body, thus making school socialization important for the development of kids, so as to prepare them effectively as citizens of the knowledge society, in order to be able to face challenges, to take advantage of opportunities, but also to have a successful coexistence and socializing in their future social and professional environment. The term “school socialization” refers to the deliberate and methodical effects of the school, as a system of transmission of knowledge and values, mainly through the process

of education, always with the aim of preparation and smooth integration of the individual into society (Αχλης, 1996).

#### **4. Learning Theories and Social Values**

In relative literature, the psychological theories related to the development and conformation of social values render around the concept of “morality”, its conceptual explanation, the various stages of moral development and of course its didactic approaches. Given the different approaches, an individual’s morality is a combination of innate morality (personal code of behavior) and morality inspired by the rules, laws, beliefs and moral imperatives of each social group in which the individual lives and acts (social code behavior). The psychological basis of “morality” refers to attitudes, motives and emotions, such as shame, guilt, empathy, compassion, which direct internal moods and external actions and maintain an important role in the moral - social behavior of individuals (Ματσαγγούρας, 2008).

According to the viewpoints of socio-cognitive theory and A. Bandura (McLeod, 2016), learning occurs in a social context where the student learns by observing the environment and what other more experienced collaborators do (Δημητριάδης, 2015), it takes place through the observation and imitation of patterns. Kohlberg, however, formed a pattern according to which human goes through 3 evolutionary levels of moral maturity. According to this, school-age children are in the stage of utilitarian ethics, where kids obey rules (means) to satisfy their desires, to achieve something pleasant (purpose) (Kohlberg, 1981). Piaget and Kohlberg’s theories of the development of moral thinking belong to the “cognitive parallelism”, are structured in stages and accept, with limitations, the social influence exerted on children by the interaction processes. The description of children social development as well as their moral composition is based on observing them in their family environment, in school and play ground (Πουρκός, 2003).

According to Vygotsky’s socio-cultural theory concept, moral development is placed within a broader cultural context (Vygotsky, 1978). Thus, individual development and higher levels of mental functions, such as evaluation and critical thinking, are the product of social interaction, mediation and interaction, of understanding and internalization of children’s moral perceptions, through adult guidance and language communication with their group peers (Δημητριάδης, 2015).

#### **5. Psychological Development of Students in Primary School**

The principles of the educational process, as they are formulated in Hellenic Primary School, must promote the values of democracy, inspire the respect for human rights, peace and freedom. Students must develop their personality with strong self-perception, emotional stability, critical and dialectical ability as well as a positive attitude for cooperation and self-action free from any prejudices, recognition and respect for multiculturalism. This means that in the framework of school education, the above social values and skills are expected to be promoted, thus will help students to become active citizens of the future and will facilitate them to participate in social activities, to express their responsibility, empathy and solidarity (ΔΕΠΠΣ Γενικό Μέρος, 2003).

#### **6. Social Values Development in Primary School**

According to Piaget (Piaget, 1932) children in the age of primary school, are in the stage of moral realism (heteronomous morality) (5–9 years old) and in the stage of moral relativism (autonomous morality) (> 10 years

old). During heteronomous morality, children understand and develop the belief that “rules” are absolute and unchanging and should apply and not be violated. Then, in the stage of moral relativism, while children move further and further away from the power of adults, they gain social experiences, recognize the process of establishing rules through mutual agreements, and challenge right or wrong (Γωνιδά, 2015).

Education in primary level, focuses on the context of autonomous morality. The comprehensive development of the student's personality and his successful social integration is sought, on the one hand through the formation and acceptance of common values and on the other hand through the development of mental emotional and psychomotor abilities and skills (ΔΕΠΠΣ Γενικό Μέρος, 2003).

## 7. Didactic Design Methodology

The concept of “interaction” is dominant in all the psychological theories presented above, as well as the internalization of principles and values. It is obvious that patterns and rules necessary for individuals’ behavior are determined by the society in which the individual develops and are influenced by emotional interaction with the “significant others”.

Didactic designs that include social values in their goals can be based on the concept of interaction and rely on the theory of constructivism. The pedagogical proposition that emerges from this concept is known as “Collaborative learning” (Δημητριάδης, 2015). Knowledge and skills that students acquire through interaction, moral and social values that they can internalize, are transformed into socially acceptable attitudes, thus contributing to the acquisition of their personality and self-awareness.

Vygotsky’s theory and the concept of social and cultural context find application in teaching practice through collaborative learning, working in small pupils’ groups and the experiential approach (Κουτσοβάνου, 2017), while it is necessary to rely on collaboration, assisted discovery and in interactive teaching.

Didactic designs must therefore adopt during teaching the organization of pupils in small groups and must promote the cooperation between their members. Designs should follow educational models that can promote communication between students, enforce development of social skills and values, such as acceptance of diversity, respect of others personality and opinion, understanding and acceptance of equal participation (equality).

## 8. Teaching of ICT in Primary School

According to the Interdisciplinary Unified Curriculum Framework for Informatics (ΔΕΠΠΣ Πληροφορικής, 2003), the purpose of teaching ICT is students to acquire an initial but structured and comprehensive understanding of the basic functions of computers, to get in touch with the various uses of them, as teaching tools, as cognitive exploratory tools and as tools for communication and information retrieval. Understanding of the above basic principles that govern the use of computers, by students, creates the necessary conditions that favor a pedagogical and didactic methodology focused on the student, facilitates the differentiation and personalization of learning opportunities, while students gain the necessary reviews and social skills.

General objectives of the cognitive subject are grouped into objectives including:

- Cognition and methodology. Acquisition of basic ICT skills and cognition, their use as a tool for exploration, creation, expression and thinking development.
- Cooperation and communication. Development of activities in the context of various collaborative group work.

According to the ICT Teaching Guide (Institute of Educational Policy) (Ινστιτούτου Εκπαιδευτικής Πολιτικής, 2020), ICT are a key tool for school transforming, learning support and enhancement and educational outcomes upgrade. They formulate and define new types of skills that students should develop and cultivate, in order to enhance learning, their continuous development and preparation for their participation in the knowledge society, where they should be able to meet challenges, but also to seize the opportunities of the new era. Teaching of ICT identifies and specializes the dimensions of information literacy (ICT literacy) and of computational, analytical, interdisciplinary critical thinking, which are the necessary skills that students should develop, in order to successfully continue their studies in high school and in their whole life. The term computer literacy describes the ability of students to use modern digital technologies to access, manage, integrate, evaluate, create and communicate information, with the aim of solving problems and ultimately their knowledge completion and continuous development. Hence, ICT, are fully integrated in the daily teaching of students and in all subjects of the curriculum, with the aim of supporting, among other things, modern pedagogical approaches to learning, development of students' critical thinking and creative ability, exploratory support, constructive and collaborative learning activities.

One of the framework components of ICT incorporation in fundamental education is “ICT as a social phenomenon” according to which the ultimate goal is students to acquire a broader digital education and to develop social skills (attitudes and values) in order to understand the new social and cultural environment that is formatting in our days. The skills that format the modern digital culture, relate to issues of electronic security, personal data protection, computer moral and ethics, management and utilization of information sources, etc.

Following the above, teaching of the course, emphasizes in the active ways of learning, in the configuration of learning conditions that will allow the completion of cognition, and in technical skills (criticism and social skills), as well as in the autonomous development of all students (individualization of learning opportunities). Students are expected to implement research learning projects, in the context of group — collaborative work, using a variety of tools, various educational environments, services and applications of the Internet. Teaching process utilizes the innate curiosity of the young age of the students, and their initiative to actively participate, collaborate with each other, develop new cognition, discover new knowledge, judge, evaluate, express and create. The educator is called to mentor pupils, to be the guide and the coordinator, to develop and cultivate the skills and to contribute to the new cognition building.

## **9. Learning Theories and ICT**

Of the three learning theories, the behavioral learning theory influenced most the development of a significant percentage of educational software since their activities and exercises relied on this theory. However, the theories that are the focus of modern research and are generally accepted are the cognitive and socio-cultural theories. The design features of the educational software and environments but also the way they are used, the way in which ICT is integrated in the course, are based on them. These theories claim that students learn by adapting their mental structures according to the interaction they have with their environment. Knowledge is created by the student who acts and communicates within specific social and cultural contexts. The student environment includes both the logistical infrastructure, the software, as well as the other students and teachers. Environment, in general, also includes the way in which all these elements are organized (Επιμορφωτικό Υλικό Β' Επιπέδου ΤΠΕ, 2013).

Specifically, educational software and environments have the following features:

- Support the idea of building cognition by students themselves,

- Encourage students' personal expression,
- Support their personal involvement, whilst in the same time promote students' social interactions,
- Support collaborative learning.

The above features make that software compatible with socio-cultural learning theories, as they integrate the interaction and communication of students and in addition provide a very structured theoretical framework for the didactic exploitation of the possibilities offered by the so-called Web.2 (Web 2.0, 2021) and social networking.

## 10. Teaching Methodology

In recent decades (from 90s and forward) collaborative learning has found support from specially designed digital technologies. This more specific area is referred to in literature as “Computer Supported Collaborative Learning (CSCL)”. Following this perspective, modern technology-enhanced learning greatly benefits from the study, design and evaluation of technological systems for collaborative learning. Reasons for this emphasis are not simply the impacts that socio-cultural theory has on education, but are due to the broader understanding that collaborative cognition-building skills are at the core of the productive process and concern human creativity. Just as in modern production areas it is a common practice for various experts to work in interdisciplinary teams for collaborative problem solving, so collaborative learning in education helps students (professionals of tomorrow) to productively unleash their creative powers, collaborate and learn within the team and solve problems in a more efficient way (Δημητριάδης, 2015).

As it becomes clear, modern learning theories propose courses organization in a way that favors social interaction, collaborative and group learning. At the same time, most work environments and educational software offer endless possibilities for communication and collaboration (direct and online communication, co-authoring, word processing, joint problem solving, digital resource sharing, role-playing and construction games, social networks participation, blogs, etc.) (Επιμορφωτικό Υλικό Β' Επιπέδου ΤΠΕ, 2013).

The organization of students in groups and the organization of the lesson with assignments and collaborative research projects, allow the creation of proper and favorable conditions for the development of social interactions between them. This is achieved, as they make an effort (with discussion, argumentation, explanations, encouragement, etc.) to overcome understanding and implementation difficulties, that the project deliberately involves. Course assignments, on the other hand, provide the opportunity to the educator to impart to students a wide range of knowledge, skills, attitudes and behaviors; skills such as creativity, analysis, composition and evaluation; attitudes such as self-discipline and individual responsibility; behaviors that arise from teamwork, such as attentive listening and respect to other person's opinion, give opportunities to team members, collaborate and work equally within the team.

## 11. Role of the Educational Space Arrangement

The place where the teaching process takes place also plays a key role in enhancing collaborative learning. According to the above, technological equipment plays an important role, as it increases the group and collaborative actions of students.

For ICT, teaching in a specialized room (computer lab), usually equipped with the appropriate computer, audio and video equipment, is an advantage, as it provides the space where students can share digital resources. They can be divided into groups, usually of two or more depending on the case, and work together face-to-face either within

the group or through group-level computer networks.

## 12. Experiential Learning and ICT

Teaching plans, whether they are about a project or a simple course assignment, distribute tasks, assign roles to students and determine ways of interaction. In the elementary school ages, group organization, offers the opportunity to deal a project, a task or an assignment as an organized team game, with the implementation of specific roles and based on specific rules. These plans can include gaming, which is an activity for all ages, is part of social and interactive processes with peers, but also with adults, and provides students with a framework for mastering and internalizing social values and rules. Rules, in addition to defining and guiding the cooperation, set limits, train students in their observance, thus contributing to their internalization and lead them to the formation of their social ethics.

By participating in the group and collaborative games of a project defined by a lesson plan, which is designed and deployed in a playful way, students develop their social and moral feelings, thus practicing their social skills. Students through role-playing practice and imitate the behaviors of others, create social patterns, while their learning comes through interaction, empathy, discovery and experimentation.

## 13. Teachers Behavior: Attitude

The development of social skills, such as communication and positive interaction with other members of the school community, ability to collaborate, empathy, adaptability, flexibility and problem-solving ability in an ever-changing world, form a strong pillar of the modern educational process given the high pedagogical value of interactive social processes, the development of social skills and the psycho-emotional empowerment of students. Educators utilize and select from a wide range of strategies, appropriate methods of teaching, learning, communication and collaboration with their students (Ινστιτούτο Εκπαιδευτικής Πολιτικής, 2021).

Especially ICT teachers utilize an enhanced environment for their teaching process in order to achieve, besides their teaching objectives, the required development of ethics and the gradual appropriation of social and moral values by students. The subject of ICT has the peculiarity that it is taught not in a class but in a laboratory space, where there is computer hardware and technical infrastructure (course resources), which the teacher should share in such a way so as to ensure their equal distribution, equal access to them by all, to ensure equal opportunities for all students, as they all have the same rights but also the same obligations. It is obvious that through the teacher's attitude to this simple allocation of resources, students gain experience (either consciously or subconsciously) in the principles of equality and respect. Respect for the right of all to equal treatment and access to available resources — tools.

In addition, the way the teaching process is organized through group collaborative methods, utilizes all the advantages of these methods, thus giving children to understand the concepts of democracy. This is achieved, as all students have equal rights to speak, equal acting opportunities and equal obligations, whilst they often need to practice their critical thinking, discussion and argumentation ability, in order to conclude to a commonly accepted decision.

Furthermore, the teacher may brink the students to face ethical dilemmas - issues that are directly related to the ethics of computers and the Internet. Such cases are the use of various files and material from the internet (texts, photos and videos), which are the mental work of somebody else and each time something is used must be

accompanied by the necessary references and respect for the rights of their author.

Moreover, through the projects and assignments themselves, the teacher can bring pupils face to face with social issues of everyday life and the acceptable attitudes towards them. By involving and exposing students, for example, to topics such as recycling, immigration, racism, language and history, they perceive and understand values and social attitudes, such as respect for the environment, fellow human beings, interracial relationships, etc. Thus, pupils meet/get familiar to a broader cultural context that contributes to the understanding and internalization of social values.

Finally, the teachers themselves act as role models for their pupils. Behavior patterns for the students, also constitute various personalities who either are mentioned through the lesson or are invited in the classroom during the course. Scope of such invitations is pupils to be inspired from them and adopt positive attitude features of behavior. In this point, it must be mentioned that ICT teachers, in addition to their individual responsibility for the behavior and attitude towards their students, since they have available all the tools of information and its exploitation, they must project to their students acceptable and recognized standards, so that they are inspired. and be exemplified by them.

#### **14. Discussion and Conclusions**

School is undoubtedly a fundamental socialization body, where each cognitive subject has its own value and its own contribution. The ICT cognitive subject, beyond the skills that it provides towards the digital literacy of students, according to the above paragraphs, is able to create the environment and the necessary opportunities for the transformation of moral and social values into acceptable attitudes that students will internalize and become aware of. This answers our first question placed in the beginning. Regarding the second question, according to the above it is concluded that it is the organization of the teaching itself that offers to Primary School pupils an educational framework for understanding and internalizing social and moral values. The role (attitude and behavior) of the teacher is crucial in the teaching configuration/organization of ICT course, so as through critical thinking, group collaborative method and social interaction, the promotion of the above values to be achieved.

#### **15. Further Work**

While writing of the present paper was about to end, thoughts of further work were already shaped. The purpose of the future work is the quantitative and qualitative highlighting of the above. Action plans for this promotion will be a series of projects aimed at the direct contact of students with social and moral values. the projects will aim to expose students to situations such as to make sense of them, to experience them and in the end the teachers to evaluate the change of their attitudes and behaviors. There is optimism that the results will be positive and will reinforce the conclusions of this publication.

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