



EDUCATIONAL ASPECTS ON SPECIAL NEED AND “CHARISMATIC” STUDENTS

Stefanos Leontopoulos¹,
Prodromos Skenderidis²ⁱ,
Vaios Liapopoulos²,
Vasilios Chatzitheodorou³

¹Directorate of Secondary Education of Larissa,
Vocational Upper Secondary School of Elassona,
Mavrodimou bystreet 40200, Elassona,
Greece

²Directorate of Secondary Education of Magnesia,
Pilot Vocational Upper Secondary School of Velestino,
End of Riga Feraiou Companions,
Greece

²Directorate of Secondary Education of Magnesia,
Gymnasium of Velestino,
Velestino-Asprogia street,
Greece

Abstract:

Teaching at any stage becomes effective when the student operates under the influence of learning motivation. However, in some cases, there are students who either appear learning difficulties or request special interests on their own and can be characterized as “charismatic”. In Greece, “charismatic” students are usually not separated from the rest of the students and often study and receive the same education as the rest of the students. As a result, their potential is not exploited and their motivation and school grades are reduced. The purpose of this work is to record the actions and means that should be used to teach students who have learning difficulties but also students who can be characterized as “charismatic”. In conclusion, teaching with the use of computers and other digital media can be integrated and significantly helps the teaching and learning of all subjects of the curriculum at all levels of education.

Keywords: education, special needs, student, school, charismatic children

1. Introduction

Schools nowadays are the meeting place of perhaps the most diverse student population than ever before, where students interact and become recipients of a variety of influences

ⁱCorrespondence email: mskenderidis@gmail.com

and behaviors [1] [2]. In this environment, it is possible to meet students who differ from the rest of the student population either because they have some kind of "disability" or because they are considered as "charismatic".

In order to work in this environment, the teacher must possess a multitude of characteristics and skills [3] [4] [5] [6] [7] which he should combine with the use of various modern means and tools [8] [9] [10] [11] [12]. For this reason, the role of the teacher as administrator of the school classroom has been recognized as multifaceted, while their work is complex and interesting [13]. Today, it is generally accepted that fast developments in information and communication technologies offer countless new possibilities. Information and communication technologies for people with special needs are radically changing the way they communicate, work, entertain themselves, and of course the way that they are educated [14] [15]. However, these people risk being excluded if it is not ensured that they enjoy equal access to the applications and technological services that are available.

2. Disability and Special Education

Among the most important issues that concern today's society as well as various scientific disciplines such as sociology, social anthropology, psychology, medicine, and even special education is the issue of disability. However, each discipline approaches disability issues differently.

People with disabilities may have sensory and kinetic issues, with organic chronic diseases, psycho-pneumatic issues, infectious diseases, autism, neurological diseases, perception issues, and generally various multi-sensory issues. This is why the term "disability" has changed from time to time, adapting to various assumptions. Thus, it has been replaced by terms such as "people with special needs", "people with special needs and abilities", "people with disabilities", but also "people with special skills or abilities" and "special needs" or "people with special skills". In Greece, the term "persons with special needs" is replaced by the term "persons with disabilities" and is the one finally adopted by the National Confederation of Persons with Disabilities.

In conclusion, in order to define the concept of "disabled" people it is necessary to clarify the content of disability as well. Disability is a complex concept in which we must not only include the dimension of the medical problem but at the same time its social dimension with the concept of the social consequences [16].

2.1. Social Model of Disability

Society considers a person who has not fulfilled the normal role assigned to them as "disabled". According to Zoniou-Sideri [17] depending on society's perspective, people with some kind of disability will be treated differently. The social model is based on the understanding that disability is a phenomenon with socio-political and cultural ramifications, which affect the lives of "disabled" people [18]. This belief is based on Oliver, [19] opinion, and according to it, the social model is nothing more than a clear focus on the economic, environmental, and cultural barriers faced by people who are considered to have some disability. These people find barriers in education, work, health

services, social discrimination as well as access to public buildings. Thus, the person with a disability has difficulty in his daily life and the reaction of those around him may be negative. However, the truth is that the characterization of an individual as "disabled" depends on how society adjusts conditions to balance out individual inadequacies. For example, for society, the "disabled" person, in addition to the diversity in his morphology (e.g. absence of limbs, vision, etc.) is also related to his work performance. However, the cause of these limitations is not the disability but the failure of society to organize itself, in order to provide the appropriate services and ensure the needs of people with disabilities.

According to Karamitsiou, [20] in addition to the beliefs of each society, the historical period also determines what disability is as well as the relationship that "healthy" people have or will have with "disabled people". For example, it may be barred to "disabled" people from participating in social processes, or they may be deprived of the means to participate, with the result that they do not develop their self-esteem.

According to Panteliadou, [21] people who are not considered capable and worthy of participation in social events develop feelings and perceptions of incompetence for themselves. Therefore, an important role in determining disabilities is not the physical or mental characteristics themselves, but their social definitions. For this reason, in an organized society with laws, rules, and values, measures must be taken to settle the consequences and difficulties of the handicaps of the person with the "disability". In conclusion, for social psychologists "disability" is related to the nature and severity of the disability and the degree to which it affects the person's daily life, as well as the attitudes of others towards the particular disability.

The multicultural school as a smaller scale of each society requires empathy, acceptance, and respect among the members of the school community and highlights diversity as an opportunity to cultivate communication skills. The teacher with the possibilities and obligations he/she has in the school community can contribute in his/her way to the transformation of the school reality [22].

2.2 Medical Model of Disability

The medical model, well known as the "individual model", connects disability with the "deficient" physical condition of the human being, i.e. physical or mental disability, where due to a particular "damage", the quality of the "normal" life of a person is affected. From the point of view of medicine and health science, people with disabilities and in general with special needs are considered to be people who show physical and mental impairments. According to the World Health Organization, "disability" is classified as:

- a) disadvantage (any loss, whether physical or mental),
- b) incapacity (partial or total reduction of capacity within the limits defined as "normal" for a human being, and
- c) as a defect that occurs in a person as a result of a deficiency or a capacity that limits or prohibits that person from fulfilling his role.

According to Karamitsiou, [20] the medical model is considered to have its roots in the Enlightenment period but also in industrial capitalism where workers were

divided into those who could and those who could not contribute to production. Regarding disability and its treatment by society, the medical model was the dominant model of the 20th century until the 1980s. Today, experts agree that the disabling condition can be congenital or acquired. However, on how experts will define disability whether it is congenital or acquired, they should also take into account some social factors that play an important role in what is considered a disability. The way we understand people or communicate with them determines both how we identify or perceive them, and how we treat them as "disabled" or not. According to the medical model, "disability" should be treated as an individual physical or mental characteristic, as an individual medical condition that is the result of impairment. Limitations experienced by "disabled" people have individual and social consequences. According to this approach, people with "disabilities", are considered weak, defective, dependent, and unable to meet their work obligations. Nowadays, because people with "disabilities" cannot live on their own, there is an overprotective attitude, pity, fear, and low expectations from society. But this may affect them by isolating them from the rest of society since they are freed from the normal obligations of a person towards society. The medical model sees "disability" as a tragedy for the person with the disability, which is adopted even by the parents of the "disabled" person. Thus, using the medical model it is difficult to highlight the social and political side of disability and the important role of social beliefs about what disability is.

In conclusion, "disability" is culturally and socially defined, based mainly on the economic and productive factors and needs of each society. On the other hand, the medical approach to disability sees only the difficulties and the medical treatment without considering the daily lifetime of the "disabled" person and does not take into account the wider aspects of the disability. Morphological and mental separation among people based on genetic characteristics is objectionable because it fails to show appropriate respect to each other. People with special needs should not be treated as "disabled", but we should not deny the existence of "disability". Society can accept people with disabilities, thanks to "social respect" and thus people with "disabilities" accept a certain role by being involved in public life. Modern society is characterized by pluralism and by a variety of logical, ethical, philosophical, and religious doctrines. The social interaction that exists between the individuals of society aims at cooperation between the participants and requires their adaptation and coordination.

2.3 Special Needs and Education

Many researchers have tried to define the concept of "special needs and education". One of them is Lamoral, [23] who presented a more expanded definition stating that: *"Special education should no longer be defined in terms of the space in which it is implemented, but more in terms of the needs of the child it is designed to address. Whether someone is disadvantaged or not depends not only on their disability but also on the school stimulus and the society in which they live. It is up to us to define what educational support should be offered to those with special educational needs"*. People who require special treatment attend a special school. A special school is a school catering to students who have special educational needs due to learning

difficulties, physical disabilities, or behavioral problems. The Special School is a "special form" of basic compulsory education.

In Greece, its operation uses the same teaching methods, measures, school programs, goals, as general schools, but takes into account the type and degree of special needs of each individual [24]. However, taking into account the phrase from the above definition that "*special education should no longer be defined in terms of the space in which it is implemented, but more in terms of the needs of the child it plans to address*" we understand that already from Frobel's time, but mainly after the appearance of "Reformist Pedagogy" and above all with the pedagogical-teaching movement of the "Work School" it has been accepted by everyone that at any developmental stage, the learner educated to act on his own, to learn and to create. However, sometimes the self-activity is more intense in some students than others, differentiating them from the rest of the students with positive and negative effects. For example, a teacher of any grade and type of school shifts to motivating that student to respond to main school activities. It is well-known that someone acts when he/she is under the influence of motivation. The stronger these motivations are, the greater the intensity of his activity. The teacher's greatest ability therefore consists in creating learning motivation for his/her students. For this reason, modern motivational psychology investigates the possibilities of developing learning motivation in children [25]. Thus, achieving learning motivation in school students is a matter of top priority both in students who either have learning difficulties or are considered "charismatic".

Otherwise, attending a lesson is a boring procedure and the student's behavior could be characterized as "problematic". Kapsalis and Charalambous, [26] in their study, reported that according to Triantis "*human behavior is a function of many factors, such as social norms, habits, attitudes, and expectations*". Thus, it is likely to be characterized by different persons as normal and desirable, or as problematic, disturbed, and undesirable [27][28]. The most common elements that are taken into account to characterize a behavior as "normal" or "problematic" are the attitudes and norms of the society [27][29][30]. Nowadays, one of the issues that concern today's society is people with special needs and their education. Thus, in recent years, several efforts have been completed in order to change what existed in the past, so that people with special needs can be integrated into society [31].

According to Plomp, [32] modern school is no longer the only "body" for disseminating knowledge but one among several others where traditional and new means of education are combined [33] [34] [35] [36] [37] [38] [39]. Nowadays schools must properly support and educate students with creative activities [40] keeping their interest in a variety of ways in an educational environment that respects their individuality and diversity.

3. Information Technology and Education (ITE)

Throughout time, human activities in all fields have been dominated by continuous progress, the use of tools, and technological achievements. Technological development in the last 50 years has not left education unaffected. According to Georganta, [41] the

rapid development of ITE has created a new reality that has brought about multiple changes at all levels. Its rapid development and spread have inevitably affected education, by affecting the "thinking and action" of many teachers. Nowadays, in modern societies, it is believed that the use of new technologies and tools is a daily habit [42]. The use of new technologies combines pedagogical advantages, because new technologies are not only a knowledge subject, which is necessary today for the technological literacy of students, but also an unprecedented supervisory "multi-media" and cognitive teaching tool not only for the main student population but even for the disabled ones [43]. With the use of digital technologies, knowledge becomes available to students, adapted to their personal needs and limitations, within a fully interactive communication environment.

Nowadays, it is believed that education is not a static process with inviolable rules and students must interact with each other both in direct contact or at a distance using various electronic media. When we use the term new technologies in special education, we refer to the support devices that are an integral part of the life of the person with a "disability" as well as to the special educational software that helps the student to develop basic skills despite the appearance of any weaknesses [44]. Learning using ITE is characterized as "e-learning". According to Koochang and Harman, [45] "electronic learning" (e-learning) is defined as: *"the delivery of education (including all activities related to teaching and learning) through various electronic media. The electronic medium could be the Internet, satellite TV, video/audio film, and/or CD-ROM"*.

The use of ITE can generally be categorized as compensatory, didactic, instrumental, communicative, evaluative, and managerial while the assistance provided by the use of ITE, especially to people with disabilities or special educational needs, is physical, cognitive, and supportive [46]. To date, numerous studies have reported on the benefits of using ITE in special education and training. According to Karolidou, [47] the main benefits includes: the abundance of assistive devices, the provision of autonomy, self-confidence, and independent learning, the provision of direct interaction and feedback, the cultivation of a sense of fulfillment and adequacy as well as self-esteem, the improvement of control capabilities and self-control, the recognition of the virtue of student diversity, the differentiating and reforming dynamics of ITE, the completion of tasks based on personal learning pace, the enhancement of cognitive and emotional development, the possibility of personalization, working in small successive steps, highlighting latent potential, providing innovation, access to communication and information, helping at home, increasing attention and concentration, improving exploratory and revelatory learning, enhancing sociability and cooperation, creating a student-centered learning environment, enhancing goal-oriented teaching, creating simulations, creating authentic and creative activities, improving self-concept, increasing enthusiasm, offering time benefits, establishing better discipline, developing cause and effect cognitive skills, enhancing memory, improving retrieval methods decisions, and the enhancement of school performance.

Among the most widespread devices are electronic computers. Computers and their applications are not only tools but also knowledge objects that prepare students for their education and professional development, while at the same time, they function as

sources of information and as mindtools, which use cognitive structures and processes that facilitate discovery learning [48]. Digital media are a tool providing the student with the possibility not only to act but also to experiment, observe, conclude, etc., [49]. There are, however, certain conditions, which are necessary for the successful integration of technology into the curriculum of schools, especially those of special education and training. However, it is not only technological development or innovation that leads to e-learning, but also the way they are used. The possession of the appropriate technology, combined with the distribution of reliable learning programs, constitutes a necessary, but not necessarily sufficient, condition for successful use [50]. The above point of view is also supported by Georganta, [41] who states that the quality of education depends on a mix of different educational materials. In general, the use of new technologies in education should be interactive, enabling students to learn on their own, promoting critical thinking, and providing data for successful learning. These conditions are necessary to be activated and adopted in the design and educational practice. Otherwise, there is a risk that teaching does not lead to learning and remains a simple teaching procedure without the expected results [51].

Software that can be used in the educational process, includes design packages, text writers, spreadsheets, databases, PC communication programs, and various "games". Some innovative forms of utilizing digital technology in special education are the following:

- Interactive whiteboard. The interactive whiteboard is a digital touch device that connects to a computer and a projector. Its user can use his finger like a computer mouse to do various actions such as writing on the board with special pens like inkless markers, since the trace they leave is automatically converted into digital form. He can also write on a specially projected keyboard, just like a computer keyboard, move and rotate objects with his hand, and operate the computer in a much more direct way. The user can interact with the depicted objects, using their finger as a mouse, directly on the screen. Also, with the use of appropriate software, it is possible to write a text on the board and automatically recognize the words and correct them. Students can draw shapes and pictures with their fingers too. Ready-made shapes and toolboxes help the educational process since the user can format and edit any object on the board surface easily and quickly.
- Digital textbooks. Students as e-readers can use digital books and several, available online, data sources.
- Online platforms. Educators can use Web 2 tools (e.g. communication forums, blogs, and wikis) and help students share information, collaborate online, comment on others' activities, and plan and achieve goals together.
- Other useful tools are the use of videos, 3D printing, and online classes and learning communities.

However, the use of new technologies as a learning tool should be such that it supports the provision of knowledge and learning, rather than a substitute for the traditional role of the teacher and conventional educational materials [52]. A common belief is the opinion that from the range of possibilities provided by technology, it should

be selected only those possibilities that can lead to a change in the educational "landscape" and contribute to the improvement of the quality of teaching.

4. Necessity and Possibility of Educating "Charismatic" Students

In trying to understand the meaning and characteristics of the "charismatic" student, it should be mentioned that as early as 1972 in the USA it was stated that "*charismatic and talented students are those who, after being evaluated by qualified professionals, are found to have exceptional abilities and are capable of high performance*". In Greece, Matsagouras, [53] mentioned as "charismatic", those children who have "*higher cognitive and creative abilities, predispositions, motivations, interests and complete the material at a faster pace*". Finally, according to Gardner's [54] criteria, the following 8 types of intelligence have been recognized: linguistic, logical-mathematical, spatial, kinesthetic, musical, intrapersonal, interpersonal, and naturalistic.

According to Heward, [55] "charismatic" students demonstrate higher performance in one or more activities such as mental ability, an association of ideas, structured thinking, academic performance, sound judgment, finding innovative solutions, artistic, creative, and leadership skills. However, in modern technology Bağriaçik and Yaman, [56] in their study commented that ostracism and internet addiction of gifted students revealed no significance between owning a smartphone, education, mother-father work conditions but showed medium level significance in age, gender, mother-father education levels.

Additionally, according to Thomaidou, [57] "charismatic" children assimilate complex knowledge better and are characterized by persistence until they complete the goal they have set, while Van Tassel and Baska, [58] reported that "charismatic" children usually learn to speak earlier and are characterized by a higher degree of self-concentration than the rest of the children. In addition, "charismatic" individuals can represent and categorize problems, are intellectually restless with a unique and divergent way of thinking by developing original and unusual ideas, and appear heightened imagination usually with solitary work characterized by perseverance, responsibility, and love for a perfect result.

According to Piirto, [59] due to the special cognitive characteristics and the personality that these children have, they must attend education programs designed to their real needs. Thus, "charismatic" students, require differentiated educational programs, teaching techniques, and examination than those existed in ordinary schools [60] [61] [62]. The readjustment of the educational program should aim at the implementation of teaching methods that enhance deep learning by revising and enriching the taught material used for "charismatic" students [63] [64]. Through these independent learning programs, the interests of the "charismatic" students are enhanced so that they do not get bored easily, enhancing their abilities and skills. By participating in the same environment together with other "charismatic" students enhances their interests, maximizes the degree of learning, and generally helps them to realize their diversity and potential.

In general, the lack of existence of education structures for "charismatic" students, as well as the non-application of a specialized educational approach for these students, is a key obstacle to the utilization of their potential. However, in some cases in recent years in general schools in Greece, specialized classes have been created such as those for parallel support, integration, and also classes for "charismatic" students. It is also important the existence of music, art and sports schools where "charismatic" students study music, arts and sports respectively. Unfortunately, in Greece, apart from the special schools for "charismatic" students (musical, sports high schools) in general schools there is a problem regarding the education of "charismatic" students mainly due to the lack of information, knowledge, training, and experience of the teachers. Thus, few teachers can recognize a "charismatic student". In contrary to what prevails in the Greek education system, "charismatic" students in some countries are identified early and follow a different curriculum for them. According to Neihart, [65] the educational techniques that are usually applied in the school are the technique of acceleration and enrichment such as the triple enrichment model proposed by Renzulli, [66]. A more enriched approach was presented in their study by Van Tassel-Baska and Brown, [58], who reported that in addition to implementing a different curriculum, better education for "charismatic" students can be achieved by grouping them, using detailed research, using demanding activities but also applying a student-centered learning procedure, where the learning object is related to the student's interests [67]. Furthermore, Ayğar and Gündoğdu, [68] concluded in their study that self-perceptions of gifted students are higher than self-perceptions of ungifted students. In SEM (Structural Equation Modeling), parental child-rearing methods related to gifted and ungifted students explain the students' self-perceptions at a statistically significant level. Knowing the particular preferences of students will make it easier for the teacher to find the temporary situations needed to create that will stimulate their interest. The teacher should also enable students to come into contact with various activities (sports - music - artistic activities - technology - environment - nature - sea, etc.). At the same time, the teacher should be alerted, be properly prepared, and observe each time the special preferences of the children, hoping that one of them will cause particular to exceptional interest to the student [69]. In order to support "charismatic" students, dialogue, cooperation, and defining interdisciplinary activities will help the education procedure of these children [53]. Teaching procedure to "charismatic" students is based on the use of as many senses as possible. This is achieved by applying basic principles of learning such as repetition, support, role plays, experiences, the simplification of objectives, etc.

Depending on the topic, problem-solving, and the project method, are applied. Furthermore, these two methods can be enriched with other actions, such as the constructive approach, brainstorming, concept mapping, juxtaposition of opinions, role-playing, simulation games, research method by asking questions, experimental method and survey of opinions/polling, etc. Thus, as one can easily understand, the range of total activities with which the teacher should bring the child into contact is not limited. The failure to recognize a "charismatic" student in time, results in these students being driven into obscurity since they do not manifest their potential, they are lost in the rest of the

crowd of students and eventually withdraw from these activities [66]. For this reason, in addition to early recognition of "charismatic" children, the teacher must show these children that he/she understands their diversity and that he/she is interested in them. However, the teacher should only make a first initial assessment and the final assessment and diagnosis of "charismatic" students should also be done by an institutionalized interdisciplinary team with defined scientific criteria.

In Greece, according to what is mentioned in the detailed curricula [70], the percentage of "charismatic" and talented students in the general population is determined by the type and range of criteria by which a person is characterized as "charismatic" or talented. The most commonly used criteria are a) selection based on the intelligence index, b) selection based on the application of "percentages", c) selection with an emphasis on individual outstanding performances, and d) selection with an emphasis on the creativity factor. Through the development of the abilities but also the personality of the "charismatic" student, various study programs aim at the complete development of the student in all areas and not only in those in which they are considered "charismatic" [71]. With today's school structure and circumstances, this principle of differentiation regarding the design, delivery, and assessment of learning activities is complex with many challenges. However, the association of "charismatic" students with other students in a friendly environment helps the latter to improve themselves through the interaction that is created [72].

It is well known that until adolescence several "charismatic" students find school boring and for this reason refuse to participate in the educational process considering that it has nothing to offer them, thus losing learning interest. If these students do not abandon school until adolescence [73] their refusal is usually manifested not so much by their non-physical presence at school but mainly through the lack of attention, hyperactivity, non-integration, and participation in group activities, arrogance towards others, assuming a leadership role but also a negative image of themselves. For this reason, it is often observed that instead of enjoying high scores on the assessment, they are ranked among students with low grades [74]. Thus, inclusive education and pedagogy for these students is believed to be one of the most effective ways since the aim of inclusive education is to eliminate school and social exclusion [75].

Finally, the family environment must be a direct partner and helper in all this effort, with parents being informed about the progress of their children and also participating in the current educational programs by encouraging their children wherever and whenever required. Thus, homework and other learning activities completed away from the school environment help them to achieve better grades. The more the parents interact with their children's learning activities in their early childhood years, the better the children get in literacy and mathematics [76]. This conclusion is in accordance with the results found in Bosedé, and Abiodun, [77] study where it was shown that there is a significant correlation between home and school environmental factors and children's cumulative learning, especially in primary schools. However, practical and excessive demands on the part of parents should be avoided as psychological pressure and possible failure can have a negative effect. "charismatic"

students are children with different personalities, wants, beliefs, interests, and needs which some try to meet with ease and others with more difficulty.

5. Conclusions

Today's school system is multifaceted and for this reason, education today is not only a learning process but also a psychological process. The educational process does not only provide knowledge and education but also prepares students for their integration into society. The general school in Greece is mainly oriented towards the average students and usually "does not see" or neglects the needs of students with learning difficulties or "charismatic" students. For this reason, the school environment must change orientation and be characterized by a positive attitude towards the "different" student in a more active and appropriate way. The teacher's positive attitude towards this diversity of students will create extra value in their knowledge and experiences while helping them to integrate into society. Today's school, in addition to knowledge and information, is necessary to shape the conditions so that both students with special needs and "charismatic" students, in addition to their abilities, can develop other personal and social skills so that they can cope with various challenges that may face in their lives, become able to manage their information and difficulties through communication and creativity. In the context of achieving the above goal, the need to have a balanced combination and harmonious coexistence in the educational process between the average student as well as those students with learning difficulties as well as "charismatic" students is deemed imperative. In all cases, the use of technological means such as computers is helpful in the educational process since teachers and IT complement each other. While computers use their unique characteristic to guide and enlighten, human teachers educate. Educators ensure a purely human element in education while letting computers deliver information. In conclusion, we could say that computers guide and teachers educate.

Supplementary Materials

Not applicable.

Author Contributions

Conceptualization, S.L., and P.S.; investigation, S.L., P.S., V.H.; and V.L.; writing—original draft preparation, S.L.; writing—review and editing, S.L. and P.S.; visualization, S.L., P.S.; V.H.; and V.L. supervision, S.L. All authors have read and agreed to the published version of this manuscript.

Funding Statement

This research received no external funding.

Institutional Review Board Statement

Not applicable.

Data Availability Statement

Not applicable.

Acknowledgments

Not applicable.

Conflicts of Interest Statement

The authors declare no conflict of interest.

About the Author(s)

Stefanos Leontopoulos holds a PhD in Plant Protection from the School of Agriculture of the University of Reading, U.K., and two Master's degrees in Plant Protection and Environmental Management from the Faculty of Agriculture of the University of Reading, and the Open University of Cyprus respectively after completing his undergraduate studies in the Department of Plant Production of the Technological Educational Institute of Larissa. He is an educator who has academic experience in various Universities and institutions in Greece and nowadays is an educator in the Directorate of Secondary Education in Larissa's region. He has participated in various research projects related to crop production, food technology, and pedagogical issues by authoring 67 publications in peer-reviewed scientific journals, as well as in proceedings of Greek and International conferences. His publications are linked to the ResearchGate account: <https://www.researchgate.net/profile/Stefanos-Leontopoulos>

Prodromos Skenderidis is a PhD and MSc holder related to Food Technology. He has been teaching in tertiary education for more than ten years. His research interests include food and educational technologies. He is an educator in the Directorate of Secondary Education in Magnesia's region, particularly at the Model Vocational High School of Velestino. His publications are linked to the ResearchGate account: <https://www.researchgate.net/profile/Prodromos-Skenderidis>

Vaios Liapopoulos is a mechanical engineer with postgraduate studies. He has been the school manager for several years in the Directorate of Secondary Education in Magnesia's region, particularly at Model Vocational High School of Velestino. His academic background and expertise contribute to the depth and breadth of this educational research.

Vasilios Hatzitheodorou is an agronomist with postgraduate studies and a PhD. He is the school manager of the Gymnasium of Velestino town in the Directorate of Secondary Education in Magnesia's region. He was a teacher at Vocational High School of Velestino for several years. His academic background and expertise contribute to the depth and breadth of this educational research.

References

- [1] Leontopoulos, S.; Skenderidis, P.; Liapopoulos, V. Modern challenges, and issues in school environment, Internet addiction, adolescent development sexuality and school bullying. *European Journal of Education Studies*, 2024, 11(1), 248-276. <http://dx.doi.org/10.46827/ejes.v11i1.5169>
- [2] Muchemii, P. Self-esteem levels among secondary school students in different categories of schools. case of public secondary schools in Nyandarua West sub-county, Kenya. *European Journal of Education Studies*, 2023, 10(11), 94-118.
- [3] Morfi, A. The profile of the teacher in the public school, a research study (in Greek). PhD Thesis, 2017, Pedagogical Department, Democritus University of Thrace.
- [4] Turkoguz, S.; Baran, M.S.; Gurbuz, M.; Tuysuz, C.; Ugulu, I. Quantitative evaluation of prospective teachers' views on inclusive education. *European Journal of Education Studies*, 2021, 8(10), 219-236.
- [5] Polyzopoulou, K.; Tsakiridou, H. Attitudes of Greek general education teachers concerning inclusion policy. *European Journal of Education Studies*, 2023, 10(6), 312-332.
- [6] Murati, R.; Ceka, A.; Besimi, A. The teacher and changes in education. *European Journal of Education Studies*, 2019, 6(4), 317-322.
- [7] Almonia, A.A.; Oliva, E.R.A. The classroom environment's mediating effect on the relationship between teacher creativity and the stability of students. *European Journal of Education Studies*, 2024, 11(1), 64-70.
- [8] Vagelas, I.; Leontopoulos, S. Differentiated education on teaching notions of plants' pathology assessment. *WSEAS Transactions on Advances in Engineering Education*, 2023, 20, 138-148. DOI: 10.37394/232010.2023.20.17
- [9] Fermani, M.; Georgiou, M. Teaching photosynthesis using an inquiry-based approach via a digital educational platform to promote students' understanding. *European Journal of Education Studies*, 2023, 10(12), 2-18.
- [10] Tsiachta, V.; Paraskevopoulos, S. Design and assessment of an integrated teaching method for teaching ecosystems *European Journal of Education Studies*, 2017, 3(10), 74-98.
- [11] Marinos, A. Teaching fractions to bilingual students: A case study in schools of the Dodecanese, Greece. *European Journal of Education Studies*, 2021, 8(11), 313-330.
- [12] Filippaki, A.; Karaoglanidis, D.; Tsianika, V.; Kartselou, Ch.; Chroniari, H. A preliminary study of a place-based education project in an urban place of Greece. *European Journal of Education Studies*, 2018, 4(4), 104-119.
- [13] Hatzidemou, E. Pedagogical reflections on the multifaceted role and complex but interesting work of the teacher (in Greek). *Modern Education*, 1986. 27, 64-67.
- [14] Hang, N.N.T.; Ngoc, M.N.; Van, H.N. Current situation and solutions to improve the quality of teaching in STEM education in general schools: a case study in some northern provinces of Vietnam. *European Journal of Education Studies*, 2024, 11(1), 297-308.

- [15] Retzepe, N.P.; Prendes-Espinosa, P.; Porlán, I.G. A mobile application to improve mathematical competence for students with learning difficulties. *European Journal of Education Studies*, 2023, 10(6), 22-46.
- [16] Fragos, V. *People with disabilities* (in Greek). 2008, Law Department, National and Kapodestrian University of Athens.
- [17] Zoniou-Sideri, A.; Deropoulou-Derou, E.; Vlahou-Balafouti, A. *Disability and education policy. Critical approach to special and inclusive education* (in Greek). 2012, Athens, Pedio publishing.
- [18] Papaisidorou, S.; Tsaliki, E. Roma mothers' views on the concept of disability: An intercultural approach. *European Journal of Education Studies*, 2018, 4(8), 1-18.
- [19] Oliver, M. *The policy of disability* (in Greek). 2009, Thessaloniki, Epikentro publishing.
- [20] Karamitsiou, H. *The social model of disability in relation to Orthodox Theology. Contribution to the field of Special Education* (in Greek). 2020, Hellenic Open University.
- [21] Panteliadou, S. *The policy of disability* (in Greek). 2006, Volos, University Press.
- [22] Ioannidi, V.; Samara, E. Children with learning difficulties and conditions of school inclusion - a brief report and a constant challenge of inclusive education. *European Journal of Education Studies*, 2019, 6(3), 2-7.
- [23] Lamoral, Ph. Special education in a European perspective. In: *Learning Difficulties of children and adolescents. The experience of Europe*. 1993, Athens, Gutenberg
- [24] Zoniou-Sideri, A. Inclusion: An educational perspective for today's school. 2011, Available at: http://www.pek.org.cy/Proceedings_2006/7.%20Kefalaio%207-Eidiki%20kai%20Eniaia%20Ekpaidefsi/7.5.%20A.%20Zoniou-Sideri.pdf
- [25] Vainas, K. Learning motivations in the Mathematics course (in Greek). *Journal of New Education*, 2006, 86.
- [26] Kapsalis, A.; Haralampus, D. *School manuals. Institutional evolution and contemporary problems* (in Greek). 1993, Thessaloniki, Aristotele University of Thessaloniki.
- [27] Christakis, K. *Behavioral problems at school age: assessment, prevention, recording, treatment* (in Greek). 2001, Athens, Atrapos Publishing.
- [28] Fontana, D. *The teacher in the classroom* (translated in Greek by Lami, M.). 1996, Athens, Savvala Publishing.
- [29] Aravanis, G. *Pedagogical and general methodology* (in Greek). 2008, Athens, Gregori publishing.
- [30] Paraskeuopoulos, I.N. *Psychology of individual differences* (in Greek). 1974, Athens, Organization of Publishing School Books.
- [31] Makumi, M.W.; Karugu, G.; Runo, M.; Muthee, J. Examining school and community preparedness for transition of young adults with intellectual disability for independent living in selected counties, Kenya. *European Journal of Education Studies*, 2021, 8(6), 182-197.
- [32] Plomp, T.; Anderson, R.; Law, N.; Quale, A. *Cross-national information and communication technology: Policies and practices in education*. U.S.A. 2009, Information Age Publishing.

- [33] Ioannidi, V.; Samara, E. Inclusive teaching: A paradigm through music. *European Journal of Education Studies*, 2019,5(11), 270-277.
- [34] Trichas, P.Ch. Teaching strategies applied by educators to teach mathematics to students with mild intellectual disabilities. *European Journal of Education Studies*, 2022, 9(8), 318-326.
- [35] Parlak, Ö.; M.; Şahin, Şeker, F.S. Effects of sports training on social and academic skills in autistic individuals. *European Journal of Education Studies*, 2021, 8(9), 1-17.
- [36] Bektaş, S.; Ercan, Z.G. A study of visual motor skills of children with special needs. *European Journal of Education Studies*, 2023, 10(8), 341-359.
- [37] Sarris, D.; Christopoulou, F.; Zaragas, H.; Zakopoulou, V.; Papadimitropoulou, P. Self-efficacy of special education teachers in Greece. *European Journal of Education Studies*, 2020, 7(4), 150-160.
- [38] Ibrahim, I.R.A. Effectiveness of cooperative learning in improving mathematical concepts among students with mild intellectual disability. *European Journal of Education Studies*, 2017, 3(3), 163-171.
- [39] Melekoğlu, M.A. Evidence-based fluency interventions for elementary students with learning disabilities. *European Journal of Education Studies*, 2019, 6(5), 411-423.
- [40] Sarivaara, E.; Keskitalo, P.; Korte, S.M.; Lakkala, S.; Kunnari, A. Let's go out! a group-based intervention in outdoor adventure education as a special educational support. *European Journal of Education Studies*, 2022, 9(9), 1-26.
- [41] Georganta, V. The role of the European Union and the Organization for Economic Cooperation and Development in the formulation of educational policy regarding the inclusion of Information and Communication Technologies in Greek Primary Education (in Greek). 2017, School of Economics, University of Piraeus.
- [42] Ndawula, S.; Namatende-Sakwa, L.; Bigirwa, J.P. Is previous student computer experience related to their attitudes towards internet use? *European Journal of Education Studies*, 2020, 7(8), 234-249.
- [43] Seiradakis, E.V. Online learning, and invisible disability: Exploring Greek EFL students' experiences. *European Journal of Education Studies*, 2024, 11(1), 106-117.
- [44] Besio, S. *Technologie assistive per la disabilità*. 2005, Lecce, Pensa Multimedia.
- [45] Koohang, A.; Harman, K. Open source: A metaphor for e-learning. Informing Science. *International Journal of an Emerging Transdiscipline*, 2005, 8, 75-86.
- [46] Tailachides, S. Modern support technologies and training of people with disabilities (in Greek). 2014, 3rd International Conference in Education, Naousa, Greece.
- [47] Karolidou, S. *Special needs and new technologies* (in Greek). 2017, available at: <https://sotiriakarolidou.wordpress.com>
- [48] Girgizas, D.V. Teaching basic concepts of Physics and Chemistry with the use of multimedia interactive material and ICT, in grades B and C of Vocational Lyceum (EPAL), (in Greek). 2017, School of Science and Technology, Hellenic Open University.

- [49] Dimakos, G. Paraskeua, F. ITE in Education: Active learning and communities of practice. In: *Introductory training issues for newly appointed teachers* (Makri, I.) (in Greek). 2007, Ministry of National Education and Religion, Pedagogical Institute of Athens.
- [50] Kriemadis, T.; Koronios, K.; Papaioannou, A.; Sioutsou, A. Management of new technologies in education: Advantages and disadvantages of applying new technologies of information and communication in the educational process (in Greek). 2017, 2nd Panhellenic Conference "New theories and practical approaches in education, Gythio, Greece.
- [51] Lionarakis, A. "Four Weddings and a Funeral": The four conditions for the use of information in education and a reason for rejecting it (in Greek). 2001, IT in education: Techniques, Applications, Teacher Training Conference proceedings, Aegean University, Rhodes Island 14-15 /12/2001, 284-288.
- [52] Kozma, R.B.; Johnston, J. The technological revolution comes to the classroom. *Change: The Magazine of Higher Learning*, 1991, 23(1), 10-23.
- [53] Matsagouras, Z. *Educating children with high learning abilities. Publicized inclusive education* (in Greek). 2008, Athens, Gutenberg.
- [54] Gardner, H. *Frames of mind: The Theory of Multiple Intelligences*. 1984, New York, Basic Books.
- [55] Heward, W.L. *Children with special needs. An introduction to special education*, (Lyberopoulou Ch.). 2001, Athens, Topos publishing.
- [56] Bağriaçik, B.; Yaman, Y. Examination of ostracism and internet addiction in gifted students according to multiple variables. *European Journal of Education Studies*, 2022, 9(2), 215-228.
- [57] Thomaidou, L. High intelligence: Gift or problem? *Bulletin 1 of the Pediatric Clinic of the University of Athens*, 1999, 46, 56-60.
- [58] Van Tassel-Baska, J. *Curriculum planning and instructional design for gifted learners*. 2003, Denver, CO: Love Publishing Co.
- [59] Piirto, J. *Talented children and adults: Their development and education*. 2007, Waco, TX: Prufrock.
- [60] İltter, B.; Leana-Taşçılar, M.Z.; Saltukoğlu, G. The effects of the bibliotherapy technique on perfectionism levels in gifted children: An experimental study. *European Journal of Education Studies*, 2018, 4(12), 153-176.
- [61] Sönmezi, D. Investigation of wetland awareness of gifted students. *European Journal of Education Studies*, 2023, 10(9), 21-31.
- [62] Bildireni, A. Examination of the skill areas of gifted children using WISC-R intelligence scale scores. *European Journal of Education Studies*, 2017, 3(9), 378-391.
- [63] Tomlinson, C.A. *The differentiated classroom: Responding to the needs of all learners*. 2014, Ascd.
- [64] Chia, K.H.; Lim, B.H. Understanding overexcitabilities of people with exceptional abilities within the framework of cognition-conation-affect-and-sensation. *European Journal of Education Studies*, 2017, 3(6), 649-672.

- [65] Neihart, M. Identifying and providing services to twice-exceptional children. In S.L. Pfeiffer (Ed.), *Handbook of giftedness in children: Psychoeducational theory research and best practice*. 2008, 115-137. New York, N.Y.: Springer.
- [66] Renzulli, J.S. «Conceptions of giftedness and its relationship to the development of social capital», in N. Colangelo and G.A. Davis (eds), *Handbook of Gifted Education*. 2003, Boston: Allyn and Bacon.
- [67] Riga, A.; Riga K. Charismatic students and the Greek educational system: Investigating the necessity and possibility of their education. 2019, available at: <https://eproceedings.epublishing.ekt.gr/index.php/edusc/is>.
- [68] Ayğar, B.B.; Gündoğdu, M. The relationship between gifted and ungifted students' self-perceptions and their parents' parenting styles: A structural equation model. *European Journal of Education Studies*, 2017, 3(3), 334-350.
- [69] Bicknell, B. *Multiple perspectives on the education of mathematically gifted and talented students*. 2009, Massey University, New Zealand (Auckland, Wellington).
- [70] Labropoulou, V.; Markakis, E.; Loxa, G. Mapping- Detailed special education programs. Guide for students with special mental abilities and talents (in Greek). 2004, Ministry of National Education and Religion, Pedagogical Institute of Athens.
- [71] Coleman, L.J.; Cross, T.L. *Being Gifted*. 2001, WaCo, T.X: Pruficck Press.
- [72] Vlamos, M.P.; Vlamou M.E.; Dimakos, M.G. Data processing by mathematical talents (in Greek). *Mentor*, 2000, 2, 149-165.
- [73] Meletea, E.T. Humanize technology: Interactive multicultural educational network and global curriculum development for gifted talented students, The 9th Conference of the European Council for High Ability: "Educational Technology for Gifted Education: From Information Age to Knowledge Era". (ECHA - 09-13 September 2004, Pamplona, Navarra (Spain).
- [74] Gross, M.U.M. «International Perspectives» in N. Colangelo and G.A. Davis (eds), *Handbook of Gifted Education*. 2003, Boston: Allyn and Bacon.
- [75] Ioannidi, V.; Malafantis, K.D. Inclusive education and pedagogy: A practice for all students. *European Journal of Education Studies*, 2022, 9(10), 1-13.
- [76] Aslanidou, E. Home learning activities, and children's learning outcomes: a review of recent evidence. *European Journal of Education Studies*, 2019, 6(1), 100-159.
- [77] Bosede, O.; Abiodun, A.I. Influence of home and school environmental factors on cumulative children learning in primary schools. *European Journal of Education Studies*, 2018, 4(11), 155-166.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).