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INNOVATE PRACTICES IN EDUCATION MANAGEMENT IN GREECE

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Abstract

Nowadays, innovation has a profound impact on every organizational system, on any industry. The same seems to apply to educational systems of any level. The world of education is changing globally, leading to further demand for design and implementation of new approaches, which might be proved more effective in pupils' future success. However, innovation does not happen in a vacuum. It is well recognized that organizational culture plays a key role to its success. This study concerns higher education in Greece, as applied today and in the forthcoming years and its aim is ternary; firstly, the study on the implementation of international innovation indicators in education, secondly, the mapping of the school organizational culture, and finally, the correlation between innovation and school culture.

Key words: *Innovation, education, school culture*
JEL Codes: I20, O30

1. Introduction

In education, although the aim is to develop pupils' students and prepare them for life, the pace of change is too slow or weak compared to other fields or systems (Fullan, 2010, Hargreaves et al., 2010; Thorsteinsson, 2014). It seems that schools, even many universities, have fundamentally changed their organization, curriculum structure, educational tools, pedagogical practices and evaluation methods. The majority of teachers are still based on traditional approaches, focusing on: a) the teaching content, where the subjects are presented to the pupils by the lecturer; b) the one-man educational manual; and c) the pupils' through conventional written competitions or tests.

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In the rapidly changing context of today's education, education is called upon to improve successful traditional practices and to bring forward new approaches that respond to today's realities of the 21st century, to the expectations and needs of students. Refugee's children for instance as well must have access to education, because it is one of their basic rights, - school environment is a bridge that helps them gradually become part of the local community (Krasteva, Pantelis, 2017: 1). New subjects, new educational tools and environments, new pedagogical approaches and innovative ideas seem to be very promising, for students and teachers, in terms of educational experiences and learning opportunities that they shape. In this context, the diffusion of educational innovations is now the first priority for education systems around the world (Fullan, 2010; Hargreaves et al., 2010; 2013; Hovne, Hovne & Schott, 2014). For example, Europe 2020 puts development as a top priority for turning the European Union into a competitive and cohesive society (European Commission, 2010). Growth should be sustainable and inclusive, inclusive. In addition, the EU aims at smart growth, based on improving performance (a) education, (b) research and innovation, and (c) digital society.

Educational dialogue is often limited to the technological characteristics of an innovation, as new-emerging technologies are shaping new directions and greatly influencing teaching and learning. There is often a misconception, which addresses Information and Communication Technologies (ICT), as such, as an innovation. This is not always expensive. Innovation only arises when teachers use the various ICT tools to organize new learning situations that do not reinforce traditional teaching practices but support open pedagogical approaches that expand and enhance learning (Bocconi, Kampylis & Punie, 2012, Sharples et al., 2015). Innovative pedagogical practices with ICT encourage and promote participatory and student-centered approaches, exploratory learning, problem solving, collaboration and creativity, linking work to classroom with home and society, etc. For example, technologies and such as mobile learning, flipped classroom, gamification, mass-open digital lessons (MOOCs) etc., actually introduce innovative pedagogical elements and fundamentally change the wider teacher and learning environment.

In general, educational innovations are related to two axes: innovative pedagogical approaches and innovative uses of educational or technological media. At the same time, two major groups of innovative educational programs have been introduced in primary and secondary schools, in the form of parallel actions:

a) Interdisciplinary programs such as Environmental Education, Health Education, Cultural Issues, Students' Creative Games, Career Education and Young Entrepreneurship, etc.

b) European programs and partnerships supported by the European Union, such as Comenius, e-Twining, Teachers4Europe and others.

2. Literature Review

2.1. Innovation

The term innovation appears to have various meanings which, however, share common features and characteristics. According to the Major Greek Dictionary (2006: 32), innovation is a "innovation or reform". In addition to identifying this term innovation with reform, one can find even more meaningful terms such as "best practice" "creativity" and "change". According to Cros 1996 (referred to in Sultana, 2001) there are over three hundred (300) definitions of innovation. The most common term, according to Cros (1996), defines innovation as "something new" (eg an object, idea, practice or process, etc.) either in absolute terms or under the perspective through of which it is implemented or applied. According to Sultana (2001: 5), this common term refers not to a new idea but also to its application. According to T. Karolova, new technologies have an impact on the overall appearance of society, raising a new degree of civilization due to the global nature of their influence (1999: 96). Marsh's views are similar (1997: 185, referring to Sultana, 2001: 5), which argues that "authentic innovations" involve an "improvement intention" and aim not at the cancellation, cancellation or sabotage of current ideas, practices or procedures applied to a system, but to improve their efficiency and to renew the stakeholders.

2.2. Educational innovation and the teaching process

Educational innovation refers to the introduction or integration of new elements, situations, processes or persons into the educational work to modify, improve, replace or change part or all of the educational practice. The Fulan definition (1991), as adapted by Sultana (2001), expresses more precisely the delineation of educational innovations. According to these writers, educational innovations relate to "real and practical interventions designed to bring about improvements in education, whether or not these improvements are realized or simply delineated by the actors involved, irrespective of whether these changes are aimed at the aims, in skills, philosophies, beliefs, behaviors or practices".

The term instructional innovation refers to the introduction, renewal or replacement of various factors of the didactic work and / or the teaching practices. A classic definition is that of Lee (1966, referring to Otto, 1970: 186) which refers to a "continuous one that involves major changes to an existing teaching practice as well as the introduction of new elements and procedures or a complete replacement of existing teaching practice. " Continuing a teaching practice refers to the various subjects of the teaching work, such as "planning and organizing teaching, new methods, models, strategies or forms of teaching, making teaching decisions, using audiovisual and other media (eg new technologies, PCs, etc.), the climate of the classroom, the management of teaching time and other activities" (Creemers, 1986). In addition, all educational innovations are often targeted at the

"instructional environment" which aims to transform, modify or change it deliberately or not deliberately, a goal that is not always achieved " (Sultana, 2001; Hovne, Hovne & Schott, 2014; Deming et al., 2015).

2.3. Aspects or levels of educational innovation

Many experts even associate the term innovation with the terms: change, renewal, best practice, creativity, or reform (Borrego & Henderson, 2014). However, before we refer to aspects or levels of educational innovation, it is worthwhile to note the relationship between innovation and change, since the latter is often the pursuit or objective of the former. According to Porter et al. (2014), the change is characterized as "the adoption of an innovation that seeks to improve the effects of education by modifying or replacing the practices that apply". In the literature on educational innovation, one often finds the point that a change requires complex planning and preparation processes at various levels, particularly those directly involved in it (Thorsteinsson, 2014). For the issues, however, these are discussed in more detail in other chapters.

2.4. Innovation at curriculum and teaching level

The curriculum is the medium in which the school's knowledge, skills, values and generally the cultural assets of a country are established and is closely linked to school textbooks, work plans, audiovisual and technological media, as well as the activities that are an integral part of it (Maritz et al., 2014).

The curriculum is usually at the heart of many of the educational innovations that are being implemented internationally. The reason is that often linked to both national and local needs as well as to external changes, trends or challenges at the international stage, such as globalization, the knowledge and information society, high technology and many others. National needs and international changes or trends are putting pressure on educational systems to renew or change CPIs in which school knowledge is structured to better respond to international challenges and to competition between countries (Hovne, Hovne & Schott, 2014). Such challenges have contributed to the creation of the new form of the Greek BS, namely, the Interdisciplinary Framework of the Program of Studies (DEPPS), the Curriculum for Advanced Studies (ASP) work plans, the Flexible Zone, as argued by various experts in our country (Alahiotis, 2004) and abroad (Borrego & Henderson, 2014).

Innovations in the curiculum have direct and indirect effects on other successive functions of the educational project. is directly related to the didactic work, which is why Borrego and Henderson (2014) argued that the curriculum is the "contraction" of the heart of education while teaching is "its expansion". Multiple interconnections of the curriculum with other aspects of the didactic work, but also the new situation created in the context of its implementation provokes several times reactions and uncertainty for the

teachers. For example, when a new curriculum has been applied in Slovenia, which demanded new roles and responsibility that burdened teachers' work, teachers made a strike (Sultana, 2001: 35), as is often the case in our country as well as in other countries. In addition, is directly related to teaching, since its delimitation, among other things, is often referred to as a "didactic plan" as a "teaching outcome" as a "designed learning environment" and the like (Borrego & Henderson, 2014).

2.5. Innovation at the level of pedagogical functions

Educational innovations are crucial nowadays, due to the explosion of knowledge and its devaluation in the short term. These trends require both the frequent updating and updating of school knowledge and the development of specific skills beyond traditional ones. For example, the memorandum function of the pupils and the transmission of knowledge by teachers are now considered traditional and obsolete. New skills have been proposed, such as "learning" students "how to learn", solving problematic situations, making decisions, and even more advanced cognitive and pedagogical functions. These skills have also added European Community skills related to literacy in mother tongue and foreign language, science, new technologies, cultural awareness and others.

These new skills, their student-centered orientation, the emergence of new teaching and learning trends require new approaches, methods and strategies of teaching and learning, such as group co-operation, teaching diversification, constructivist teaching, teaching through new technologies and other related (Demetriou, 2004; Hunter, 2006; Deming et al., 2015).

Pedagogical innovations also refer to new teacher-student relationships, to the creation of a learning and teaching environment and, more generally, to a new "ecology" (Maritz et al., 2014) of the school class, the school unit, and a new "culture of education" (Deming et al., 2015).

2.6. Innovation at institutional or school level

Closely linked to education - teacher training and education is also the implementation of innovation at institutional or school level. There is a widespread view that teachers should not only have a broad understanding, positive attitude and consciousness in favor of the pursued innovation, but also have built a school culture with a common "vision" to realize the educational innovations sought at any level, particularly at institutional or school level. The common vision and cooperation between all the actors involved helps them to become aware of the "what", "how" and the "why" of school life, as well as the rationale of the applied innovation (Hovne, Hovne & Schott, 2014).

In order to facilitate the achievement of the goal of the common vision and the collective culture of the actors involved, the educational institutions must "rebuild and reorganize the framework of their organization so as to form a" learning community "of all involved persons rather than being considered, as a central function, the transmission of information "(Maritz et al., 2014). Wals (2014) also argues that "schools have unique

cultures, practices and traditions, and educational innovations or changes need to be adapted to the specific context of the school. The same view is expressed by Bradshaw and Hultquist (2016), who proposes that "educational innovations should focus on the whole school unit in the context of collective decision-making and cooperative practices, harmonized by the leadership of a director". The holistic approach of the whole school approach is suggested by others, such as Fulan and his colleagues (1990), which it considers "catalytic for the implementation of educational innovation by linking school practice with school improvement". However, both classroom and school-based practices require a risk that teachers either do not want or can not get (Corlu et al., 2014). Despite the unanimous proposals of specialists on the holistic approach of educational innovation for implementation in a particular institution or school units, there can be no concrete conclusions with universal effect that will be useful to the educators of educational policy. One factor that prevents unanimous proposals is the diversity and heterogeneity of school units. According to Galton (1989) "the diversity of schools in Europe is one of the biggest obstacles for educational policy makers ... since it does not allow for safe conclusions on the success of educational innovation".

2.7. The complexity of the process of implementing educational innovations

The process of implementing an educational innovation is not an easy process. Instead, it depends on multiple factors on multiple levels to achieve and succeed. What we mention in the section below shows that even in cases where educational innovations have been institutionalized, it is not certain that their implementation will be realized and consolidated. This is because attempting to implement educational innovation is not an isolated act, but a process with a variety of aspects or levels, as has already been mentioned.

Sultana (2001) argues that the application of educational innovation is a "life cycle" that consists of a fundamental dynamic and is governed by a variety of strategies including the origin of innovation, ie who to promote it, the means by which it is channeled towards schools, the ways in which it is accepted by schools, how it is piloted, and how it is monitored and evaluated ... to succeed".

In principle, the chances of a successful success of an innovation are much greater if the educational innovation sought is not "foreign" or alien to the institution of the institution in which it is introduced. On the other hand, if educational innovation or reform is "genius" - that is, it comes from the institution itself or the organization - the chances increase its success (Sultana, 2001; Bradshaw, M., & Hultquist, B. L. (2016). A minute and important point is who and how an innovation is being promoted. There are indications that, when educational innovation is promoted from "top to bottom", there is a potential for the educational innovation sought to encounter obstacles. To a large extent, educational innovations in centralized systems, such as our country, are carried out in this way and are imposed without substantial results (Maritz et al., 2014).

Educational innovation, by definition, according to Lozano et al. (2015) provokes, a priori, a process of questioning and resistance to it and is treated as a "foreign body". This motivates Sultana (2001) to argue that educational innovations should not be promoted one-dimensionally from top to bottom. When this becomes educational innovation "it challenges the dominant positions and practices and leads to further questioning by all those who have an interest in preserving the old ways, on the one hand, and those who show preference to follow the new ways from the other". In fact, and in view of the resistance put forward by the stakeholders, an educational innovation will not be adopted if its actors do not identify with it, nor are they given the appropriate incentives - for example. wages, professional advancement, etc. - and there are no similar forms of support. This support - economic, ethical, etc. - is important for the realization of educational innovation because sometimes there is only apparent support without the corresponding resources or appropriate forms of delivery. In these cases Sultana (2001) considers that "educational innovation is likened to the Trojan Horse, where the hope is that it will expand and influence other elements or processes of the system or the educational web".

Given that educational innovation is identified with change, it is imminent that the persons involved who are accustomed to a given situation will not accept and resist it, since the upcoming change will disrupt the balance of dominant practice that is established in their institution.

This difficulty is expressed by a number of scholars, others stressing that critical factors are "people and relationships, and the support mechanisms needed to successfully implement educational innovations, especially when seeking to improve practices" (Credaro, 2001). Similar views are expressed by other scholars, such as Fulan (1993) and Lozano et al. (2015) who say that education reforms are difficult to precisely plan, but educational innovations are even more difficult to implement. Various difficulties in the implementation of reforms or educational innovations are highlighted by Fidalgo-Blanco, Sein-Echaluce and García-Penalvo (2015) who argue that their complexity is due to a variety of factors including: "Educational innovation or change must not is linear and needs to evolve through its various stages of implementation, while the requisite conditions are the commitment of the persons or bodies involved, collective decision-making, the common vision, cooperation as well as the operation of support structures". Given these peculiarities, he suggests four steps in implementing any change or educational innovation. These stages are: "first, the creation of the conditions for information and awareness of the upcoming change or innovation, second, the consolidation of the funnel-facilitation structures, the third, the complexity of the parallel process concerning the persuasion of the persons involved, the decision- and their commitment to promoting educational innovation or change, fourth, the start of implementation, and the adaptation of educational innovation to the school's context and its assessment".

According to the above, we note that non-realization of educational innovation or change is due to a number of factors, the most important of which are: attitudes or attitudes - natural or negative - of the persons involved, the lack of a holistic approach to educational innovation, change or reform, the absence of follow-up and post-evaluation, the absence of material, moral, scientific support, and the process of change that disfigures the persons involved (Credaro, 2001; Fidalgo-Blanco, Sein-Echaluce & García-Penalvo, 2015).

2.8. Essential preconditions for the application of teaching innovations

The scientific review of the definitions on this issue has shown that it is important that any educational or teaching innovations do not remain at the level of intent or philosophical dimension but must be disentangled in all the factors and aspects that we have mentioned above. This view is shared by Hill (2014) who suggests that educational and teaching innovations should extend to the whole "school ecology". School ecology is addressed at the "proactive level" and concerns the vision and mission of education or institution, the administrative and organizational level that includes both the "strategic planning" of the implementation of innovation and the appropriate logistical infrastructure. At the same time, it seeks to transform the level of the curriculum, the total of the intended types and results of learning, as well as the harmonization of the "intended curriculum", the applied curriculum and the attained curriculum (Hill, 2014), the level of educational relationship that involves the harmonious interaction of teachers and pupils, the level of the evaluation process in which the attainment of the aims and objectives of the institution is established, the assessment of the pupils' performance as well as the didactic work (Hovne, Hovne & Schott, 2014).

The concept of school ecology makes it clear that in order to achieve educational innovations it must extend to the holistic dimension of teaching and teaching work. Therefore, every didactic innovation must include all aspects of systematic design and organization or "instructional design" (Hornsby & Osman, 2014). This view is expressed by Cohen & Ball (2000), who, referring to didactic innovation, states that "it is impossible without the 'teaching architecture', which includes as a minimum the following: planning the aims and objectives of the course , teaching materials (eg workbooks, books, etc.), didactic activities, the organization and / or reorganization of teaching, the adaptation of the teaching environment and the social climate, the teaching time, appropriate use resources, the activation of internal teaching innovations and learning incentives and other actions that potentially contribute to improving teaching practice in order to achieve the learning outcomes and learning objectives".

According to them, the implementation of teaching innovations also requires appropriate administrative support, appropriate financial support, well-prepared and educated teachers, and the use of new technologies to implement school knowledge. The most important factor of success of a teaching innovation is the teachers themselves, the

pedagogical training they have acquired, their knowledge about the methodology of teaching, their identification with the specific institution and the proposed teaching innovations, whether they concern the implementation new curricula and textbooks, or the introduction of technological devices or new educational practices. It goes without saying that when all of the above and other factors do not co-exist to support didactic innovation, there is a great chance of halting, canceling or even canceling or failing, as mentioned below.

2.9. Nature and Role of Organizational Culture within Higher Education

Universities in western countries have traditionally been characterised by a level of stability arising from "lifetime employment, collective decision making, individual responsibility, infrequent promotion and implicit, informal evaluation" (Dill, 1982: 307). Over the last two decades, the sector had experienced increasing levels of student numbers and diversity even before the inauguration of the "modem universities" in 1992 leading to significant changes (Gibbs, 2006; Duong & Swierczek, 2019). Since this period the overall number of universities in the UK more than doubled. Some of the new designated universities brought in management styles not traditionally associated with those of the ancient or civic universities (Hornsby & Osman, 2014).

It would appear to be the case that the increased focus on employer-led initiatives in the last decade, appraisal, performance-related pay, increasing casualisation18 of the workforce, trends towards massification and more pro active staff development to name but a few, is different in character than in the post 1960s.

This distinctive change - particularly in managerial style - may suggest to some senior management within the sector that the degree of predictability associated with a loosely-managed traditional university life has gone and that they are now in a different climate. The impetus for the study of universities as cultural settings, however, preceded this conflation of the former polytechnics with the established university sector.

2.10. Innovation and Organizational Culture

Literature asserts that innovation and change is successfully introduced when we understand the culture of the organization to be changed. Since '80 it has been a prerequisite for businesses in order to compete, to understand first their organizational culture (Schein, 2017). Not only scholars but also organization and business guru advisors (Kotter, 2011; Bremer, 2012; Gibbons, 2015; Englund, Olofsson & Price, 2017) counsel for innovation and change through culture change. Many mapping and decoding efforts on successful companies have been held in an attempt to find the secret of profitability, personnel satisfaction and sustainability in the market (Hofstede et al., 2010; Kotter, 2011; Buschgens et al., 2013). Moreover, the fact that there is still a great interest on developing assessment and measuring instruments for exploring organizational culture (Schein, 2017) and innovation (OECD, 2014) is a strong evidence of the constant interest.

The second half of the XX century and the beginning of the third millennium have stood the management specialists to look at the organization in a new way. If traditionally all management schemes and techniques are looking to the creation of standard approaches in order to solve the various problems, in the current XXI century management concepts will be associated primarily with the creation of conditions for the development of management methodology, which will allow decisions to be taken in such a way that they differ from the self-similar (Karolova, 2005: 45) Researchers still keep measuring culture and innovation as they still feel that there is more to discover. According to Schein (2017) profitability forces businesses and organizations to study their culture in order to drive positive change. Likewise, educational organizations explore their culture and adaptation of innovations in order to boost a culture of change (Fullan, 2007; MacNeil, 2009; OECD, 2014; OECD, 2015; Englund, Olofsson & Price, 2017). According to Fullan (2007) educational change comes along with multidimensional innovations. Educational innovations should involve changes in materials, in teaching approach and in beliefs, otherwise they are not innovations at all (Fullan, 2007; Bennett, Lockyer & Agostinho, 2018).

Although there are plenty of studies on organizational culture and on innovation separately, according to Buschgens et al. (2013) there has not been enough research in the relation between innovation and organizational culture. Moreover, among the studies on the relation between innovation and organizational culture only a few are conducted in education, as it is presented below. Just recently in USA (Oberchain et al., 2002, Warford, 2010; Hewitt-Dundas & Roper, 2018), in Holland (Haelermans and Kristof, 2012), in Israel (Avidov- Ungar and Magen-Nagar, 2014), in Iran (Ashraf et al., 2014) and in England (Greany, 2018; Hewitt-Dundas & Roper, 2018) researchers have related innovation with culture, change or/and efficiency, in education.

Oberchain et al. (2002) and their study on the relation between institutional type, organizational culture and innovation in higher education, colleges and universities, found that institutes with "clan" culture accommodate more frequently innovations. Jaskyte and Dressler (2005) explored organizational culture, leadership and size in association with innovation in nonprofit human services. Their findings revealed that organizational innovativeness is positively associated with innovation and aggressiveness value dimensions, whereas negatively associated to stability value dimensions. Finally, organizational culture was not related to leadership, while it was positively related to size. It is also important to mention that in a regression analysis, organizational culture was the only significant determinant. According to Jaskyte and Dressler (2005) there is a theoretical framework for the relation of organizational culture and innovation but there is lack of empirical explorations.

Warford (2010) explores a model in order to understand the reasons that facilitate or reject educational change. He ascertains that three reasons make teachers resistant to new ideas; the continuous bombardment with new reforms, the low perception of school

conditions on behalf of the state and the control over teachers. Naranjo-Valencia et al. (2011) have found that there is a positive correlation between organizational culture and innovative strategy in businesses. Adhocracy cultures foster innovation strategies. A study by Haelermans and Kristof (2012) has found out that there is a positive relation between innovation and efficiency and that psychological approach, pedagogic process and education chain innovations are significantly related to school efficiency. However, innovations in the professionalization of teachers are insignificantly related to school efficiency. Moreover, they claim that budget constraints and pupils' background hinter innovations. Finally, Haelermans and Kristof (2012) found that the impact of a single innovation introduction, for example the use of IT in schools, has been largely explored, but there is lack of analyzing combinations of more than one or two indicators of innovation. They claim that such a study gives a better perspective of pupils' performance and school reality.

Seen et al. (2012) explored the relationship between innovation and organizational culture with the Denison Organizational Culture Model. They explored a variety of variables and were led to the conclusion that there is a positive correlation only between innovation and creating change and between innovation and organizational learning. A meta-analytic review (Buschgens et al., 2013) of 43 studies of a sample of 6341 firms gives a broad view of the relation between organizational culture and innovation. They claim that organizational culture is necessary condition for successful innovation. They suggest that Quinn and Rohrbaugh's Competing Values Framework is a proper tool to analyze organizational culture and it suits to innovation. They have also found that managers of innovation-oriented firms choose to utilize developmental culture. Finally, it suggests that the variety of the 40 different values that were explored in those 43 studies are not reliable enough to come up with a theoretical explanation concerning the correlation of organizational culture and innovation.

Other studies on the relation between organizational change and assimilating innovations conclude that innovative culture demonstrates low resistance to change and to innovation introduction (Avidov-Ungar & Magen-Nagar, 2014). Others have studied the consequences in teachers' methods when innovations are introduced and they suggest that major difficulties are met. (Fullan & Smith, 1999 in Avidov-Ungar & Magen-Nagar, 2014; Al-Emran, Elsherif & Shaalan, 2016).

Ashraf et al. (2014) investigated the correlation among organizational innovativeness, organizational culture and organizational effectiveness in higher education. Their study deduced that adhocracy, market and clan culture have significant positive correlation with organizational innovativeness and effectiveness. On the contrary, hierarchy culture showed no significant relationship with either organizational innovativeness or effectiveness. They found that organizational culture has a direct impact on both innovation and effectiveness and additionally organizational culture influences effectiveness through innovation. Thus, they suggest policy makers should

take into consideration the chance to introduce innovations by engineering the appropriate organizational culture.

Smit (2014) led a research exploring the relationship between organizational culture and innovation adoption in organizations. He used two models in order to build a measurement tool to explore the relation between the two parameters. He found that there is a positive relation between the two notions. In particular, the innovation- oriented organizations were those with strong strategic culture. Recently, Greany (2018) has explored institutional and systemic factors that encourage and/or prevent change and innovation. In his research, while analyzing change factors, he found that change is possible when a value-based framework is built. This could be an indication of the importance of values and hence organizational culture for innovational changes.

In Greece there has not been any research on the relation between innovation and organizational culture. However, there have been many studies with other correlations, such as quality and innovation in education, innovation and teachers motivation in education (Lourmpas & Dakopoulou, 2013), organizational culture type and the degree of role and ambiguity and role conflict among health care professionals (Rovithis, 2016). There is also research on organizational culture and public-sector employee motivation (Sahinidis, 2014), organizational culture, burnout and work engagement (Maziari, 2014).

3. Conclusion

Innovation and organizational culture play a critical role in improvement and development of organizations and businesses. Furthermore, innovation is imperative in today's education and school should undergo constant transformations in order to adapt to the changing demands of the society. Organizational culture has interfered within the modern school structure and research should pay attention to uncover the peculiar characteristics of school units. Additionally, the ways that innovation can be supported within school environments should be studied along with the barriers that can negatively affect the application of innovative ideas. As a result, the research that follows the current article will provide additional information and data on the matter discussed.

REFERENCES

Al-Emran, M., Elsherif, H. M., & Shaalan, K. (2016). Investigating attitudes towards the use of mobile learning in higher education. *Computers in Human Behavior*, *56*, 93-102.

Ashraf, G., Kadir, S.A., Pihie, Z.A. & Abdullah, M.R. (2014). The Mediator Role of Organizational Innovativeness between Organizational Culture and Organizational Effectiveness, *British Journal of Education*. 2(6), 30-54.

Avidov-Ungar, O. & Magen-Nagar, N. (2014). Teachers in a changing world: attitudes toward organizational change. *Journal of Computers in Education*, 1(4), 227-249.

Bennett, S., Lockyer, L., & Agostinho, S. (2018). Towards sustainable technology-enhanced innovation in higher education: Advancing learning design by understanding and supporting teacher design practice. *British Journal of Educational Technology*, *49*(6), 1014-1026.

Bocconi, Stefania, Panagiotis G. Kampylis, & Yves Punie. "Innovating learning: Key elements for developing creative classrooms in Europe." *Luxembourg: Publications Office of the European Union* (2012).

Borrego, M., & Henderson, C. (2014). Increasing the use of evidence-based teaching in STEM higher education: A comparison of eight change strategies. *Journal of Engineering Education*, *103*(2), 220-252.

Bradshaw, M., & Hultquist, B. L. (2016). *Innovative teaching strategies in nursing and related health professions*. Jones & Bartlett Learning.

Bremer, M. (2012). *Organizational Culture Change, Unleash your organization's potential in circles of 10*. Zwolle Netherlands: Kikker Groep.

Büschgens, T., Bausch, A., & Balkin, D.B. (2013). Organizational Culture and Innovation: A Meta-analytic Review. *Journal of Product Innovation Management*, 30(4), 763-781.

Corlu, M. S., Capraro, R. M., & Capraro, M. M. (2014). Introducing STEM education: Implications for educating our teachers in the age of innovation.

Deming, D. J., Goldin, C., Katz, L. F., & Yuchtman, N. (2015). Can online learning bend the higher education cost curve?. *American Economic Review*, *105*(5), 496-501.

Duong, D. H., & Swierczek, F. W. (2019). The Impact of Top Management Team and Organizational Culture on Product/Service and Process Innovation in Vietnamese Banks. *Journal of Applied Finance & Banking*, *9*(2), 55-68.

Englund, C., Olofsson, A. D., & Price, L. (2017). Teaching with technology in higher education: understanding conceptual change and development in practice. *Higher Education Research & Development*, *36*(1), 73-87.

Fidalgo-Blanco, A., Sein-Echaluce, M. L., & García-Penalvo, F. (2015). Epistemological and ontological spirals: From individual experience in educational innovation to the organisational knowledge in the university sector. *Program*, *49*(3), 266-288.

Fullan, M. (1990). Staff development, innovation, and institutional development. *Changing school culture through staff development*, 3-25.

Fullan, M. (2007). *The New Meaning of Educational Change*. 4th edn. Teachers College Press, NY.

Fullan, M. G. (1993). Why teachers must become change agents. *Educational leadership*, *50*, 12-12.

Gibbons, P. (2015). *The Science of Successful Organizational Change: How Leaders Set Strategy, Change Behavior, and Create an Agile Culture*. Pearson Education LTD.

Gibbs, G. (2006) 'Why assessment is changing', in C. Bryan and K. Clegg (eds.) *Innovative Assessment in Higher Education*, London: Routledge.

Greany, T. (2018). Innovation is possible, it's just not easy: Improvement, innovation and legitimacy in England's autonomous and accountable school system. *Educational Management Administration & Leadership*, 46(1), 65–85.

Haelermans, C. & Kristof, D.W. (2012). The Role of Innovations in Secondary School Performance: Evidence from a Conditional Efficiency Model. *European Journal of Operational Research*. 223(2), 541–549.

Hewitt-Dundas, N., & Roper, S. (2018). Innovation in UK higher education: A panel data analysis of undergraduate degree programmes. *Research Policy*, *47*(1), 121-138.

Hill, D. (1982) The Management of Academic Culture: Notes of the Management of Meaning and Social Integration, *Higher Education,* 1, 303-320.

Hill, P. (2014). Online educational delivery models: A descriptive view.

Hofstede, G., Hofstede, G. J. and Minkov, M. (2010). *Cultures and Organizations, Software of the mind, Intercultural Cooperation and Its Importance for Survival*. 3rd edn. New York, NY: MacGraw-Hill.

Hornsby, D. J., & Osman, R. (2014). Massification in higher education: Large classes and student learning. *Higher education*, *67*(6), 711-719.

Hovne, A. S., Hovne, B. S., & Schott, T. (2014). Entrepreneurs' innovation benefitting from their education and training and from national policy and culture: A global study. *International Journal of Entrepreneurship and Small Business*, *23*(1-2), 127-144.

Jaskyte, K. & Dressler, W.W. (2005). Organizational culture and innovation in nonprofit human service organizations. *Administration in Social Work,* 29(2), 23- 41.

Kotter, J. P. (2011). Leading Change Why Transformation Efforts Fail. In: *On Change Management.* Harvard Business School Publishing Corporation, Boston Massachusetts

Krasteva R., Pantelis Ef. (2017) Bridging relationships between education, refugee crisis and tourism, paper in Scientific Conference "Education and New Learning Technologies", 3-5 July 2017, Barcelona, https://library.iated.org/view/KRASTEVA2017BRI

Lourmpas, S. & Dakopoulou, A. (2014). Educational Leaders and Teachers' Motivation for Engagement in Innovative Programs. The Case of Greece. *Procedia - Social and Behavioral Sciences*, 116, 3359-3364.

Lozano, R., Ceulemans, K., Alonso-Almeida, M., Huisingh, D., Lozano, F. J., Waas, T., ... & Hugé, J. (2015). A review of commitment and implementation of sustainable

development in higher education: results from a worldwide survey. *Journal of Cleaner Production, 108,* 1-18.

MacNeil, A.J., Prater, D.L. & Busch, S. (2009). The effects of school culture and climate on student achievement. *International Journal of Leadership in Education*, 12(1), 73-84

Maritz, A., De Waal, A., Buse, S., Herstatt, C., Lassen, A., & Maclachlan, R. (2014). Innovation education programs: toward a conceptual framework. *European Journal of Innovation Management, 17*(2), 166-182.

Naranjo-Valencia, J.C., Jiménez-Jiménez, D. & Sanz-Valle, R.S. (2011). Innovation or imitation? The role of organizational culture. *Management Decision*, 49(1), 55- 72

Obenchain, A.M., Johenson, W.C. & Dion, P.A. (2004). Institutional types, organizational cultures, and innovation in Christian colleges and universities. *Christian higher education*, 3(1), 15-39.

OECD (2014). *Measuring Innovation in Education: A New Perspective.* Educational Research and Innovation. Paris: OECD Publishing

OECD (2015). *Schooling Redesigned: Towards Innovative Learning Systems*. Educational Research and Innovation. Paris: OECD Publishing

Porter, W. W., Graham, C. R., Spring, K. A., & Welch, K. R. (2014). Blended learning in higher education: Institutional adoption and implementation. *Computers & Education, 75,* 185-195.

Schein, E. (2017). *Organizational culture and leadership*. 5th edn. San Francisco: Jossy-Bass

Seen, N.Y., Singh, S.K.G. & Jayasingam, S. (2012). Organizational Culture and Innovation among Malaysian Employees. *The Journal of Human Resource and Adult Learning*, 8(2)

Sharples, M., de Roock, R., Ferguson, R., Gaved, M., Herodotou, C., Koh, E., ... & Weller, M. (2016). Innovating pedagogy 2016: Open University innovation report 5.

Smit, J. (2014). The Relationship between Organizational Culture and Innovation. In: *Proceedings of the International Information Management Association 25th Annual Conference*. October 2014, Palm Desert, CA, USA.

Thorsteinsson, G. (2014). Innovation education to improve social responsibility through general education. *Tiltai, 61*(4), 71-78.

Wals, A. E. (2014). Sustainability in higher education in the context of the UN DESD: a review of learning and institutionalization processes. *Journal of Cleaner Production, 62,* 8-15.

Warford, M.K. (2010). Testing a Diffusion of Innovations in Education Model (DIEM). *The Innovation Journal: The Public Sector Innovation Journal,* 10(3), 1-41.

Каролова, Т. (2005) Стратегически мениджмънт.Умението да ръководим съвременен бизнес, Университетско издателство „Неофит Рилски”, Бл.,ISBN 954-680-361-8, с.45.

Каролова,Т. (1999). Социално-икономически аспекти на информатизацията, Университетско издателство „Неофит Рилски”,ISBN 95-680-108-9, с.96.