

KONSTANTINOS KARAMPELAS

Personal Information

Name : Konstantinos Karampelas
Date of birth : 04/05/1978
Place of birth : Rhodes, Greece
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Education:

- 2002-2006 PhD, School of Education, University of Southampton.
Thesis title: “Educational Reform, Curriculum Change. The role and dimensions of teacher and adult education. The case of Greece” (supervisor: Prof. Tony Kelly).
- 2001-2002 Master’s in education MA(Ed) in Organisational Improvement & Development, Research and Graduate School of Education, University of Southampton, UK.
Dissertation Title: “Multilingual Education in Greece and the UK: An Approach to Teachers Perceptions” (supervisor: Dr. Patrick Fullick).
The course involved units on Social and Educational Research, Management, Statistics Organisational Improvement and IT.
- 1997-2001 Degree in Education, Department of Pedagogy, Faculty of Humanities, University of the Aegean, Rhodes, Greece (Grade Excellent).
Dissertation Title: “Comparing Performance of Mainstream and Bilingual Students in Mathematics & Mathematics Education: A case study”. The course involved units on Education, Pedagogy, Statistics Social Research as well as Teacher Training.

Employment in tertiary education

- 2017- Research and Teaching Associate at the Department of Elementary Education, University of the Aegean. Teaching 'Elementary Science Literacy', 'Teacher Training'.
- 2015-2017 Research Associate at the University of the Aegean. The program is of Erasmus plus status, titled "Electronic Regenerated Freirean Literacy through Empowering Community Techniques (e-Reflect)". Duties within this program include preparation and training of teachers in innovative approaches and practices.
- 2012-2016 Tutor at the Higher School of Pedagogical and Vocational Education of Greece (Department of Rhodes). Courses: 'Paidagogy', 'Didactics' and 'Teaching Practice'.
- 2007-2016 Tutor in seminars courses organised by the University of Connecticut USA, and the University of the Aegean, Greece within the program PAIDEIA.
- 2010-2011 Tutor of Science Education, at the Department of Education, University of the Aegean, Greece. Courses taught 'Principles of Science Education', 'Elementary Science Education Theory and Practice'.
- 2008-2009 Research Assistant, University of the Aegean, Pedagogical Department of Elementary Education, Program 'Rural Wings'. The program is sponsored by the European Union. The duties of the program include carrying out research on particular sites as schools, environmental, educational or community centres where satellite internet is installed, supervise and observe changes, write reports and participate in dissemination of the project.
- 2006-2007 Research Assistant, University of Southampton, Centre for Higher Education, Management and Policy (project sponsored by the LEADERSHIP FOUNDATION). The main duty of the post was to support the Director of Human Resources by undertaking prescribed research tasks in accordance with a specified research project. These may include visits to Higher Education Institutions, interviews with senior staff, surveys, document analysis, mapping career histories, post holder and stakeholder interviews, computer-based data analysis or library research as directed by the research award holder leading to publication in leading international peer-reviewed journals and presentation at major conferences. Another duty was to carry out routine administrative tasks associated with a specified research project, for example risk assessment of research tasks, organization of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting. It was also necessary to carry out occasional undergraduate supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of School academic staff

Employment

- 2010-2017 Permanent Teacher at public Greek Primary Education. Appointed after success in National Exams.
- 2004-2007 Greek language tutor in Wyvern Technology College, Hampshire

Training:

2002-2004: Research Training Program. School of Education, University of Southampton. The course involved Units as: Research design, Research Ethics, Research Evaluation, Research Skills, Data Collection, Data Analysis, Qualitative Research, Quantitative Research and Statistical Analysis, N-Vivo, SPSS. (Duration: 168 hours)

1999-2001: Trainee teacher in Rhodes, Greece. (Duration: 400 hours)

Distinctions:

2002-2006: Scholarship from the School of Education, University of Southampton for Doctoral Studies.

1998-2001: Scholarships and Funding awards from the National Scholarship Foundations of Greece

Research Work

Articles, Book Chapters, Conference Records Chapters

Raptis, N., Andreadakis, N., & Karampelas, K. (2020). Transition to a Learning Organization within a Highly Centralized Context: Approaches in the Case of Greek Teachers' Perceptions. *International Journal of Learning, Teaching and Educational Research*, 19(1), 1–15. <https://doi.org/10.26803/ijlter.19.1.1>

Karampelas, K. (2019). Cross Curricular Science in Elementary Schools in Greece - The Curriculum Factor. *International Journal of Learning, Teaching and Educational Research*, 18(7), pp. 16–32. <https://doi.org/10.26803/ijlter.18.7.2>

Karampelas, K. & Skoumios, M., (2019). Technological Teaching Material in Science Classes of Greek Elementary Schools. In: E. Varonis (2019). *The International Conference on Information Communication Technologies in Education (ICICTE 2019) Proceedings, Chania Crete, 4-6, July, 2019*, pp. 144-253.

Chionidou-Moskofoglou, M., Skoumios, M. & Karampelas, K. (2019). Primary Teachers' Teaching Practices in Mathematics and Science Classes. A descriptive Research Approach. *Mediterranean Journal for Research in Mathematics Education*, 16, pp.7-18.

Karampelas, K., Kouroutsidou, M., & Raptis, N. (2018). Ontology and School Culture: Does Legislation Influence School Culture in Centralized Education Systems? *International Journal of Learning, Teaching and Educational Research*, 17(9), 102–116. <https://doi.org/10.26803/ijlter.17.9.7>

Karampelas, K. (2018). Identifying Potential to Promote the NOS in Elementary Science Teaching Packages. *International Journal of Learning, Teaching and Educational Research*, 17(6), 1–18. <https://doi.org/10.26803/ijlter.17.6>.

Karampelas, K., Skoumios, M. & Chionidou-Moskofoglou, M. (2018). Instructional Technology in Mathematics and Environmental Science Greek Primary School Classes. In: L. Morris & C. Tsolakidis, (2018). *The International Conference on Information Communication Technologies in Education (ICICTE 2018) Proceedings, Chania, Crete, Greece 5-7 July 2018*, pp. 278-288.

Karampelas, K., (2017). Virtual Inquiry: Using Virtual Experiments in Inquiry-Based Science Teaching. In L. Morris & C. Tsolakidis, (2017). *The International Conference on Information Communication Technologies in Education (ICICTE) 2017 Proceedings Rhodes, Greece, 6-8 July 2017*, pp. 1-11.

Karampelas, K., (2016). Teaching Experimental Design to Elementary School Pupils in Greece. *European Journal of Science and Mathematics Education*, 4(4), pp. 460-468.

Karampelas, K., (2016). Can the Clubs finally 'Lift the Rock'? Assessing the sustainability of Reform in Greek Education System. *International Journal of Learning, Teaching and Educational Research*, 15(6), pp. 61-77.

Karampelas, K., (2016). Computer Assisted Science Inquiry in the Science Club. In: Morris, L. & Tsolakidis, C., (Eds). *The International Conference on Information Communication Technologies in Education (ICICTE 2016) Proceedings. Rhodes, Greece 7-9 July 2016*, pp. 91-101.

Karampelas, K. & Karvounidis, S., (2015). Creating Environmentally Oriented Online Learning Communities. Conference Proceedings, *International Conference of Information and Communication Technologies in Education (ICICTE)*. Kos, 9-11 July 2015, pp. 302-311.

Karampelas, K., Mantikou, S. & Karvounidis, S., (2014). Virtual Reality in Elementary Science Class: The Case of a Greek Primary School. *Conference Proceedings International Conference*

of Information and Communication Technologies in Education (ICICTE), Kos, 3-5 July 2014, pp. 241-250.

Karampelas, K., Mantikou, S., Karvounidis, S., Economidou, V. Liakou V., (2013). ICT as Foundation for Autonomous Learning in a Greek Primary School. *Conference Proceedings International Conference of Information and Communication Technologies in Education (ICICTE)*, Chania, 4-6 July 2013, pp.133-143.

Karampelas, K., Mantikou, S. & Karvounidis, S., (2013). ICT and Developing Literacies in the Science Classroom: The Role of Virtual Experiments and Simulations in the Greek Primary School. *Conference Proceedings International Conference of Information and Communication Technologies in Education (ICICTE)*, Chania, 4-6 July 2013, pp.354-364.

Karampelas, K. (2012). The Virtual Experiment in the Science Classroom. *Proceedings of International Conference of Information and Communication Technologies in Education (ICICTE)*, Rhodes, 5-7 July 2012, pp.49-60.

Fokiali, P., Pipinos, G., Karampelas, K., (2008). Educators' Attitudes towards the Conditions for Effective Implementation of Curricular Reform. In: G. Mpagakis, (Ed.), (2008). *One year after the Implementation of New Curricula: What has changed?* (in Greek). Athens, Grigoris publications, pp. 131-147.

Fokiali, P., Pipinos, G., Karampelas, K., (2007). Educators' Attitudes on the Reforms on Curricula and Textbooks in Primary Schools. *Education Sciences*. 4, pp. 79-98.

Karampelas, K., Kelly, A. & Fokiali, P., (2006). Interraction and Communication in Schools as Essential Condition for Systemic and Sustainable Reform. In: G. Bagakis, (Ed), (2006). *Education Reform: The Intervention of the Educator and the School*. Athens: Metechmion, pp. 56-65.

Karampelas, K. & Kelly, A. (2005). *Redesigning Time management in response to Educational Change: Teachers perception towards timing, instruction and further education*. CD of Proceedings of the Conference of the International Congress for School Improvement. Barcelona, Spain, 2-5 January, 2005.

Karampelas, K., Kelly, A., & Fokiali, P., (2004). Change in Primary Science Education in an unchanged School Environment: Teachers' perceptions. In: V. Tselves, P., Kariotoglou, M. Patsadakis (Eds), (2004). *Science, Learning and Teaching. 1st Volume. Proceedings of the 4th Pan-Hellenic Conference on Science and Technology Education, Athens, 26-28 November, 2004*. National and Kapodistrian University of Athens, pp. 482-490.

Karampelas, K. & Kelly, A. (2004). *Curriculum Reform. The role of Teacher and Adult Training*. CD of the Proceedings of the Conference of the International Congress for School Effectiveness and Improvement. (ICSEI), Rotterdam, Netherlands, 6-9 January 2004.

Karampelas, K., Koza, M., Kostopoulos, A., Lioreisi, E., Manikarou, E., Spanopoulos, D., (2000). Bilingual Systems. In: E. Skourtou, (Ed), (2000). *Bilingualism*. Rhodes: University of the Aegean, pp. 109-116.

Karampelas, K., Koza, M., Kostopoulos, A., Lioreisi, E., Manikarou, E., Spanopoulos, D., (2000). Bilingual Education within Multicultural Education. In: E. Skourtou, (Ed), (2000). *Bilingualism and Learning on the Internet*. Rhodes: University of the Aegean and Pedagogical Institute, pp. 123-132.

Participation in International Conferences:

1. Karampelas, K., Mantikou, S., Karvounidis, S. & Liakou V., (2013). The ‘Clubs’: A new Institution in the Greek Education System. Conference of the Learner Community - Celebrating the 20th Learning Conference, Two Decades Exploring Innovation in Education. Rhodes, Greece, 11-13 July 2013.
2. Taylor, J., Strike, A. & Karampelas, K., (2008). Academics Work and Life in the UK: Approaching through Perceptions of University Staff. World University Forum, Davos, Switzerland, 2008. 31 January – 2 February 2008.
3. Taylor, J., Strike, A. & Karampelas, K., (2007). Introducing Career Paths for Academic Teachers in UK Higher Education. Conference of European Association for Research on Learning and Instruction. Maastricht, The Netherlands, 14-16 November, 2007.
4. Taylor, J., Strike, A. & Karampelas, K., (2007). Emerging Career Pathways for Academics. QAA Conference "Emerging landscapes: Research into quality management in higher education". Birmingham UK, 27 June 2006.
5. Karampelas, K & Kelly, A., (2006). Preparing the Ground for Educational Change: Training Teachers Appropriately. Conference of European Association for Research on Learning and Instruction. Leuven Belgium, 19-21 October, 2006.

Dissertations

1. Karampelas, K., (2006). *Managing Change and Reform in Science Education in Greece*. PhD Thesis, Department of Education, University of Southampton, UK. (supervisor: Prof. Tony Kelly).
2. Karampelas, K., (2002). *Promoting Scientific Literacy to Culturally Diverse Learners: An Approach to Teachers Perceptions*. Masters’ Thesis. Department of Education, University of Southampton, UK. (supervisor: Dr. Patrick Fullick).
3. Karampelas, K., (2001). *Comparing Performance of Mainstream and Bilingual Students in Mathematics & Mathematics Education: A case study*. Degree Thesis, Department of Pedagogy, Faculty of Humanities, University of the Aegean, Rhodes, Greece (Grade Excellent).

Scientific Interests:

Science Education

Cross curricular Science, Mathematics, Environmental Education and
ICT Innovation and Reform in Science and Education

Science Education, Gifted and Talented Education.

Languages:

Greek: Native language.

English: PhD University of Southampton, UK

Master in Education, University of Southampton, UK

Cambridge Certificate of Proficiency in English, (1999)

French: Diplôme d'Etudes en Langue Française 2 (2001)

Analysis of Research Work

Articles, Book Chapters, Conference Records Chapters

Karampelas, K., (2016). Can the Clubs finally ‘Lift the Rock’? Assessing the sustainability of Reform in Greek Education System. *International Journal of Learning, Teaching and Educational Research*, 15(6), pp. 61-77.

This study focuses on a new institution implemented in the Greek education system. Known as „clubs“, this innovation addresses pupils who have a talent and special interest in a particular subject. The research context is a primary school in Greece, where clubs were run during the last three years. The literature shows, however, that reforms are not easily implemented in established educational contexts and the Greek education system is no exception. The main barriers to reform are school structure and culture. Through a qualitative approach, the study explores whether this innovation can be sustainable in this particular context, by answering three basic research questions: 1) Is there acceptance of the need for the clubs by the members of the education community?, 2) Are the school structures assisting in the implementation of the reform?, 3) Is the existing evaluation procedure adequate to support educators in their efforts to improve the clubs“ function in future? The findings show that the reform can be implemented despite the challenges presented by the school context.

Karampelas, K., (2016). Computer Assisted Science Inquiry in the Science Club. In: Morris, L. & Tsolakidis, C., (Eds). *The International Conference on Information Communication Technologies in Education (ICICTE 2016) Proceedings*. Rhodes, Greece 7-9 July 2016, pp. 91-101.

This paper examines the innovative teaching approach of computer assisted inquiry in science subjects. This approach is justified through research to promote effectively knowledge, skills and attitudes in science as well as computer subjects. When teachers implement it though, challenges arise. Most of these challenges are generated by factors of the school context where teachers work. In this research the approach was implemented in the Science Club, in a primary school in Greece. In this club, attempts were made to reduce these factors. Through a qualitative research it was concluded that the club was indeed a fruitful context, but several challenges remained.

Karampelas, K. & Karvounidis, S., (2015). Creating Environmentally Oriented Online Learning Communities. Conference Proceedings, International Conference of Information and Communication Technologies in Education (ICICTE). Kos, 9-11 July 2015, pp. 302-311.

This study examines the possibility of an Online Learning Community (OLC) of primary school classes to promote environmental literacy. The community was composed of four primary school classes in Greece, on the E-twinning platform. The members of the community would carry out common activities focusing on constructing knowledge on environmental concepts and issues and developing skills required to approach problem solving on environmental challenges. Through a qualitative approach, based on the activity theory, the study concluded that to an extent environmental literacy was promoted, learners respected the potential of the OLC. However barriers emerged due to the school structure.

Karampelas, K., Mantikou, S. & Karvounidis, S., (2014). Virtual Reality in Elementary Science Class: The Case of a Greek Primary School. Conference Proceedings International Conference of Information and Communication Technologies in Education (ICICTE), Kos, 3-5 July 2014, pp. 241-250.

The aim of this case study is to investigate any benefits of introducing virtual reality software in science projects that can support the actual goal of science teaching. The project takes place during science classes in a primary school in Greece. After examining whether (a) virtual reality helps achieving the teaching goals set, (b) has positive responses by the learners, (c) is supported by the school context and (d) is convenient cost-wise, it was concluded that virtual reality can have benefits when implemented. However, there are issues to be considered in what concerns responses, the school context and cost.

Karampelas, K., Mantikou, S., Karvounidis, S., Economidou, V. Liakou V., (2013). ICT as Foundation for Autonomous Learning in a Greek Primary School. Proceedings of International Conference of Information and Communication Technologies in Education (ICICTE), Chania, 4-6 July 2013, pp.133-143.

This study takes place in a Greek Primary School. It investigates the possibility to promote autonomous learning, as a new learning paradigm, through Information and Communication Technologies (ICT). This is done by answering whether the pupils: 1) became motivated to use ICT for learning purposes, 2) used ICT to gather resources about concepts and units of curriculum subjects, 3) used ICT to apply or develop managerial skills. These are abilities of autonomous learners. The conclusions show that pupils managed to learn to use the ICT through a self-learning perspective, however more has to be done.

Karampelas, K., Mantikou, S. & Karvounidis, S., (2013). ICT and Developing Literacies in the Science Classroom: The Role of Virtual Experiments and Simulations in the Greek Primary School. Proceedings of International Conference of Information and Communication Technologies in Education (ICICTE), Chania, 4-6 July 2013, pp. 354-364.

This project examines the benefits of using simulations and virtual experiments in a science classroom by comparing two elementary 5th grade groups, of the same school, in Greece. In the first, simulations and virtual experiments were used, whereas in the second not. Through action research, the study investigates whether their use can support the development of scientific literacy, digital literacy and new attitudes towards learning, which are goals, set by the National Curriculum. Conclusions show that simulations can help learners become scientifically literate. However, with regards to digital literacy and learning attitudes, the wider context seems to prevail.

Karampelas, K. (2012). *The Virtual Experiment in the Science Classroom*. Proceedings of International Conference of Information and Communication Technologies in Education (ICICTE), Rhodes, 5-7 July 2012, pp. 49-60.

This paper presents findings from a study about the potential of enhancing science classrooms with virtual experiments. Considering the widely claimed benefits of using information technologies and multimedia, along with the importance of experimental tasks in

a science class, this action research process took place in a Greek primary school science class. The focus was on the following questions: (a) Which units or concepts of science curriculum can be assisted by the use of virtual experiments? (b) How can the use of virtual experiments enhance pupils' skills both for the subject of science as well as information and communication technologies? (c) What barriers can be surpassed by these experiments? (d) What challenges arise? The data were gathered through documents such as the official curriculum, observations, pupils' notes or work, as well as individual or group interviews with the pupils, parents and teachers. Findings show that there can be both benefits and risks with using the virtual experiment. The role of the teacher or mediator, along with appropriate lesson planning should not be neglected.

Fokiali, P., Pipinos, G., Karampelas, K., (2008). Educators' Attitudes towards the Conditions for Effective Implementation of Curricular Reform. In: G. Mpagakis, (Ed.), (2008). *One year after the Implementation of New Curricula: What has changed?* (in Greek). Athens, Grigoris publications, pp. 131-147.

This study presents the findings of a research project on 214 primary educators in Greece. The motivation of the project was the education reform on text-books and curricula, which was implemented during the academic year 2006-2007. The study reveals the educators' attitudes towards: a) systemic versus non-systemic education reform and b) the obstacles in implementing change along with the conditions and prospects for systemic and sustainable reform. The latter ones are grouped into factors relevant to: a) change context management, b) reform planning and designing processes and c) the educators, the main agents of the reform in practice. The study concludes that educators suggest that systemic reform is more appropriate for school and education system improvement while they point out the elements that prevent effective reform implementation.

Fokiali, P., Pipinos, G., Karampelas, K., (2007). Educators' Attitudes towards the Reforms on Curricula and Textbooks in Primary Schools. *Education Sciences*, 4, pp. 79-98.

The particular study refers to the attitudes of primary school educators, in Greece towards education reform and the way it is managed. After a brief literature review, the study records the expectations of 214 educators on the reform that was implemented during the academic year 2006-2007 on the curricula and the textbooks of Greek Primary Schools. The parameters examined are information resources, further education sufficiency and the level of readiness for the implementation of the reform. It is also examined whether age, gender, studies and prior experience in education innovations work as factors of differentiation of the attitudes towards reform. The main conclusion drawn is that educators recognise problems in their further education, training and professional development opportunities. They express their concern for the sufficiency of the existing infrastructure. However they have expectations and maintain a positive attitude towards the particular reform.

Karampelas, K., (2006). *Managing Change and Reform in Science Education in Greece*. PhD Thesis, Department of Education, University of Southampton, UK. (supervisor: Prof. Tony Kelly).

This research examines recent reform of the primary science curriculum in Greece - introduced in 2000 - and examines the likelihood of the reform being systemic and

sustainable. The aim of the reform is to promote modern learning approaches and pedagogies, which research in science education and school management suggests leads to more effective and improved science teaching. More specifically, it aims to promote a constructivist approach in science lessons; integrating activities and transforming traditional teachers into teacher-managers who do not simply transmit new knowledge, but help pupils critically to self-approach problem solving. In this way, the reforms were expected to trigger a transformation of schools from 'traditional' to 'modern learning' organisations in accordance with the demands of modern society. Notwithstanding the aspiration, according to most of the research literature, educational reforms in Greece have not been successful historically. The highly centralised character of the educational system and its focus on highly competitive general examinations used primarily to filter university admissions, have prevented the effective implementation of reform over the years. As the current reform in the primary science curriculum does not offer or claim to offer any hope of restructuring this examination-centred culture, it is doubtful that it will prove to be either systemic or sustainable.

Generally, the method used in the collection of qualitative data for this research was the interview. Through interviews, the agents of reform - teachers and others involved in education at the core of the change process - gave their thoughts about the new curriculum and its implementation. Some data from interviews was triangulated with documents and observations. In particular, teachers, head-teachers, school consultants, university tutors, policy-makers, pupils, parents and secondary science teachers from different parts of Greece give their thoughts about: (a) the reasons for the reform; (b) their attitudes towards the reform; (c) the dimensions of the reform; and (d) the way the reform was managed and its impact on the public's understanding of science. All data was transcribed and analysed with the help of NVivo (qualitative data analysis) software.

The findings of the research show that the reform was not implemented as required despite the fact that all stakeholders acknowledged its necessity. Barriers to reform appeared to emerge, such as teachers' inability to change their ways of working, teachers' inability to cope with difficulties that accompany reform implementation, schools' inability to restructure its functions, the sheer pressure of examination competition on pupils and the lack of appropriate support for agents of reform from the government. The findings show that a change limited to curriculum and reform of textbooks does not influence or take into consideration many of these barriers to effective implementation and is ultimately unlikely to impact deeply on science teaching and the Greek educational system going forward. Trying to fit a new curriculum into an unchanged and inflexible school context affects negatively the implementation of reform. Necessary though reform might be, it cannot of itself change school culture and be successful, systemic and sustainable.

Karampelas, K., Kelly, A. & Fokiali, P., (2006). Interraction and Communication in Schools as Essential Condition for Systemic and Sustainable Reform. In: G. Bagakis, (Ed), (2006). *Education Reform: The Intervention of the Educator and the School*. Athens: Metechmion, pp. 56-65.

Contemporary theories around school management claim that a centrally designed reform that is formally introduced in schools can be an opportunity for improvement of the co-operation and communication climate. This way it can contribute to the transformation of schools to modern learning communities, compatible to the demands of the open knowledge society. The particular study examines if the reform in Primary Science Education in Greece, introduced in 2001 created opportunities for innovation in cooperation and communication in

schools and examines the opinions of 121 teachers through the following questions: 1) Do the teachers consider the particular change in Primary Science Education necessary for the improvement of teaching and learning? 2) Do they exchange thoughts, ideas and experience around the new teaching approach with other members of the learning community? 3) Do they take initiative for the creation of new institutions of cooperation and communication in a long-term plan? The findings show that teachers agree with the aims of the proposed reform, they exchange ideas with other teachers in their every-day life work context but do not take any initiative for the creation of wider models or institution for communication or cooperation.

Karampelas, K. & Kelly, A. (2005). *Redesigning Time management in response to Educational Change: Teachers perception towards timing, instruction and further education*. CD of Proceedings of the Conference of the International Congress for School Improvement. Barcelona, Spain, 2-5 January, 2005.

This paper examines the relationship between the implementation of educational change in the school life and the management of time. The study refers to the Greek educational system, where a recent reform has challenged radically the traditional patterns of primary science by introducing new approaches to teaching and new textbooks. The change, by giving emphasis on constructivist learning, on problem solving activities, laboratory experiences and scientific thinking processes, calls for a re-definition of the typical programs, in ways that are consistent with the new educational goals. According to current educational theories, the ability to respond to innovation is an essential component of the schools' intellectual capital, which is the totality of the experiences, knowledge and competence of school personnel. Consequently, for effective school management, it is expected that teachers, in a climate of educational reform, should try to balance between the new paradigms of science learning, which are not consistent with past practices, and the existing timetable. Theoretically, this effort may lead to the development of alternative models of school timing, prioritisation of tasks and to the redesigning of the school culture in general, so as to support professional growth for the teachers as well as active, authentic learning for students. The project examines the opinion of 114 teachers, through semi-structured interviews around the following themes: a) Does the given time (scheduled or discretionary) act as an obstacle to the implementation of change? b) Are the members of the learning community willing to manage their time so as to address the new challenges? c) Is it possible for the present reform to contribute to more effective time-management strategies, in terms of learning outcomes and school culture? Teachers argue that the time allocated for science instruction is not adequate to support the new processes. In their majority, they feel that for better outcomes, more time is needed both for planning and instruction. Regarding their roles as members of the school community, the re-definition of the science programs does not seem to serve as a stimulus for changing attitudes and beliefs. Teachers do not feel responsible to act as managers or researchers in organising school time. Their views are still governed by the idea that instructional time is of singular value that teachers behave as deliverers of knowledge that instruction is basically textbook-centred and that decision-making rests at higher levels of authority. In conclusion, teachers are still confining their thinking to the current time structure, without stretching their imagination in response to new goals. They do not seem to have become more reflective about their role in the school change process. However, managing time is not a matter of temporarily making time to catch up or to update. The need for time will exist as long as schools strive for excellence. It is difficult to alter the way that time is structured but there is always a need to suggest alternate strategies for more effective time management.

Karampelas, K., Kelly, A., & Fokiali, P., (2004). Change in Primary Science Education in an unchanged School Environment: Teachers' perceptions. In: V. Tsifli, P., Kariotoglou, M. Patsadakis (Eds), (2004). *Science, Learning and Teaching. 1st Volume. Proceedings of the 4th Pan-Hellenic Conference on Science and Technology Education, Athens, 26-28 November, 2004.*. National and Kapodistrian University of Athens, pp. 482-490.

The study approaches theoretically and empirically the perceptions of teachers on the reform on 'Science Education' in the 5th and 6th grade of the Greek Primary School, which was implemented in 2001. The theoretical part analyses the aims of an Educational reform, both generally and specifically in Science Education, in relationship with the educational result as well as 'school culture'. In the empirical part a sample of educators expresses opinion on the impact of the reform on the educational result and the climate of school culture. The study draws the conclusions that improvement on Science Education will have limited success unless it is a part of a holistic and systemic effort.

Karampelas, K. & Kelly, A. (2004). *Curriculum Reform. The role of Teacher and Adult Training*. CD of the Proceedings of the Conference of the International Congress for School Effectiveness and Improvement. (ICSEI), Rotterdam, Netherlands, 6-9 January 2004.

This work investigates the recent reform in Greek primary science education, focusing on the reactions to change as perceived by schoolteachers, policy-makers, school consultants and university professors. A semi-structured interview was addressed to a sample of these groups, along four questions covering the following:

- (a) meaning of change;
- (b) relationship between reform and school culture;
- (c) contribution to school improvement;
- (d) effects on learning outcomes.

A positive attitude on the reform's necessity is monitored, while the feeling is that a non-holistic reform, not taking into account the examination-centric character of the highly competitive, highly centralised Greek educational system, is far from what is necessary for a sustainable improvement. The short-term effects on learning outcomes are not promising predicting the reform's temporary character. It is concluded that a systemic large-scale change, addressing the peculiarities of Greek education, covering structures and curricula, but also beliefs and understandings, is essential in guaranteeing success.

Karampelas, K., (2002). *Promoting Scientific Literacy to Culturally Diverse Learners: An Approach to Teachers Perceptions*. Masters' Thesis. Department of Education, University of Southampton, UK. (supervisor: Dr. Patrick Fullick).

The thesis examined the perceptions of Primary School Teachers in Greece and the UK around the performance of culturally diverse children in Science subjects. According to literature and contemporary pedagogy, such learners face problems at schools mainly due to their linguistic challenges and the difficulties of adaptation in the different school context. The research was quantitative. The participants, in semi-structured interviews, claimed that

Science Education approaches that encourage participation of pupils in learning activities, cooperation of pupils with others and constructivist learning can help them to overcome the barriers of knowledge and can create a multicultural climate in the School context. The thesis was in the context of:

- Science Education
- Multicultural and Bilingual Education

Karamelas, K., (2001). *Comparing Performance of Mainstream and Bilingual Students in Mathematics & Mathematics Education: A case study*. Degree Thesis, Department of Pedagogy, Faculty of Humanities, University of the Aegean, Rhodes, Greece (Grade Excellent).

This thesis examined the performance of bilingual primary pupils in Mathematics. A study was based on the comparison of performances of a group of bilingual learners with an equal group of mainstream learners in Greek primary Schools. The study, which was of quantitative nature showed that there was no statistically significant difference.

Karamelas, K., Koza, M., Kostopoulos, A., Lioreisi, E., Manikarou, E., Spanopoulos, D., (2000). *Bilingual Systems*. In: E. Skourtou, (Ed), (2000). *Bilingualism*. Rhodes: University of the Aegean, pp. 109-116.

This project was on bilingualism. Its aim was to investigate the percentage of bilingual children in primary schools in the wider region of Rhodes. Questionnaires were distributed to pupils and parents, who gave information around the languages they were speaking in their family, school and social background.

Karamelas, K., Koza, M., Kostopoulos, A., Lioreisi, E., Manikarou, E., Spanopoulos, D., (2000). *Bilingual Education within Multicultural Education*. In: E. Skourtou, (Ed), (2000). *Bilingualism and Learning on the Internet*. Rhodes: University of the Aegean and Pedagogical Institute, pp. 123-132.

The project refers to the necessity of a dynamic multicultural socialization of the learners that experience bilingualism and the necessity of multicultural education that can repel the dangers deriving from social exclusion and isolation. There is an examination of the interaction of languages, which is the relationship between the language of the social context and the language of the school context.

Contributions in International Conferences:

Taylor, J., Strike, A. & Karamelas, K., (2008). *Academics Work and Life in the UK: Approaching through Perceptions of University Staff*. World University Forum, Davos, Switzerland, 2008. 31 January – 2 February 2008.

There has been an increasing emphasis from policy bodies and higher education institutions in the UK on the need to improve their management of human resources in higher education. This research, funded by the Leadership Foundation for Higher Education, aimed to allow an interplay between national policy development and the personal stories of academic career

participants. The research involved semi-structured interviews of 21 academics, maximizing the variation by choosing six English pre-1992 higher education institutions of varying status, across five non-cognate disciplines and representing both genders. The policy issues which dominate the national and institutional management debate; pay and conditions of service, competition for staff in a global context, future demand for recruits, affordability, modernization and so on are not the same as those issues which academics as career participants raise. Academic staff are, by contrast, within the context of their particular subject discipline, concerned about early career insecurity and their progression towards career grade and institutional seniority. This career goal seems to be pursued against a perceived implicit age based timetable, while challenged by increased workload and hindered by issues relating to gender and ethnicity.

Taylor, J., Strike, A. & Karampelas, K., (2007). Introducing Career Paths for Academic Teachers in UK Higher Education. Conference of European Association for Research on Learning and Instruction. Maastricht, The Netherlands, 14-16 November, 2007.

Teaching in UK Higher education until recently, has been given less attention in comparison to research. As far as academics are concerned, there was a single career pathway, the traditional model, which starts from the level of Lecturer and ends in Professorship, based on performance on three dimensions of academic work, which are research, teaching and administration, with emphasis on the first. This had negative effects on the quality of teaching. However, Higher Education is currently going through fundamental reforms. Universities are currently introducing new career paths for their staff in their official promotions procedures and criteria. These address to staff willing to focus on only one of those dimensions, as is teaching, who until recently had comparatively limited opportunities for progression in university in academic terms, as their posts suffered from lack of status and the fact that they were usually contract based.

However, literature on educational reform has shown that simply introducing a new policy does not change the attitudes and the organizational culture, even if that is welcome by the members of educational organization, as the Universities are. It is certainly important for a reform that the members of the staff agree on its necessity. However, this may not be adequate if the reform is to have a significant impact on the working environment, as this acceptance does not automatically lead to perception change.

A research to examine the validity of this statement has been carried out in six British Universities. The sample that participated in semi-structured interviews and was composed of the human resources directors and of 54 Academics from different disciplines: languages; economics & management; sciences; engineering; and health sciences. The research tries to negotiate the major topic through three main key questions, which are: 1) What are the actual motivations and drivers of these reforms? 2) What are the attitudes of staff members towards them? and finally 3) What are the factors, elements and activities that are significant according to current academics for a career. Their responses were triangulated with the promotions procedures of these Universities.

The findings show that in spite of the fact that there are positive comments towards the introduction of the new career pathways, there is still concern about them. Even though many academics agree that it was high time for the Universities to show appreciation to teaching as well as the staff that want to work in that orientation they still consider that it cannot be given equal status to research. There are of course differences from one institution to another. Nevertheless, most academics from the sample show clear preference towards the

traditional career pathway and research is still considered the most important mission of them. It may well be too early though to evaluate the results of this newly introduced career structures.

Taylor, J., Strike, A. & Karampelas, K., (2007). Emerging Career Pathways for Academics. QAA Conference "Emerging landscapes: Research into quality management in higher education". Birmingham UK, 27 June 2006.

Higher Education in the UK is going through fundamental reforms. The continuous rise in the world loads has led many Higher Education Institutes in the establishment of new type of academic professions with purely research, teaching or administrative duties. However, research on Educational Reform shows that a reform in policy is not automatically accepted and adopted by the members of the educational organization, even if they agree to its necessity. A research on 21 academics of different faculties in 6 English Universities concludes that the participants, on one hand, believe such professions should exist. On the other hand they don't believe they deserve 'academic' status.

Karampelas, K & Kelly, A., (2006). Preparing the Ground for Educational Change: Training Teachers Appropriately. Conference of European Association for Research on Learning and Instruction. Leuven Belgium, 19-21 October, 2006.

This paper examines the relationship between educational change implementation and the issue of teacher training. The study refers to the Greek educational system, where a recent reform has challenged traditional patterns of primary science by introducing new teaching approaches and new textbooks. The change emphasises on constructivist learning, problem solving activities, laboratory experiences and scientific thinking processes. Teachers are not any more simple knowledge transmitters. They are expected to act like leader-managers who engage in decision-making, cooperate with others, and seek for resources and ways of improving their work. In doing so, they establish the appropriate school environment and program for pupils to construct new knowledge by themselves. The change, therefore, calls for re-definition of teaching, in ways that are consistent with new educational goals. According to current educational theories, the ability to respond to innovation is an essential component of schools' intellectual capital, which is the totality of experiences, knowledge and competence of school personnel. It is expected that teachers are trained and prepared to act like managers, take advantage of the schools intellectual capital in order to apply the reform effectively. The project examines the opinion of 130 teachers 10 consultants, 3 policy-makers and 9 University Tutors, through semi-structured interviews around: (a) The reasons for the reform; (b) The problems that emerge; (c) The kind of training teachers receive; and (d) Their attitudes towards it. All participants agree that the reform was necessary. They say however that problems arise during the reform implementation as lack of equipment, inappropriate training, time and financial cost. They also agree that there is concern and provision for teacher training. Teachers and consultants, however, argue that this training is not adequate to implement the new science curriculum as required. In their majority, they feel that it focuses on introducing new pedagogies and learning paradigms ignoring actual problems teachers have while teaching as equipment, school structure, time and cost. They don't get enough training to show them how to act like leaders who cooperate, use the schools' intellectual capital while organising their work. Regarding their roles as members of school community, the re-definition of science programs does not seem to serve as stimulus for changing attitudes and beliefs. Teachers do not feel responsible to act as

managers. Their views are still governed by the idea that teachers behave as deliverers of knowledge that instruction is basically textbook-centred and that decision-making rests at higher levels of authority. Apparently the training they receive has not informed them about the need to change their perception of work. Because of that the possibility of change to succeed and have a deep impact on the educational system is reduced.

