

“HIGH TECH-HIGH TOUCH”: THE CREATION OF A COMMUNITY OF SELF-DIRECTED LEARNERS IN PRIMARY EDUCATION FOR SOCIAL DEVELOPMENT—PILOTING A WIKI

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Abstract

Given the financial crisis situation in Greece, there is a growing need to intervene with children at a young age, not only to navigate the financial crisis per se, but to build a better world for the future. The aim of this paper is to share with the educational community the attempt of a group of six graders in a Greek elementary school to develop a community of self-directed learners and their achievements in a wiki environment.

Background to the Project and Theoretical Framework

During the school year 2011-2012, I had been transferred as educational advisor to the Hellenic Parliament. I had the honour and the privilege to be assigned by the Prime Minister's Office to support the research work of Dr. Marcie Boucouvalas who was visiting Greece as a Fulbright scholar. Boucouvalas' research¹ essentially aimed at uncovering the driving and restraining forces in navigating needed change in the context of Greece's financial crisis². According to Boucouvalas (Pyrini, 2012):

Change is a constant in life but during some eras and in certain countries the call for change permeates life itself, requiring shifts that are sometimes of a transformative nature. Such is the case in Greece right now. These moments in the lives of both individuals and countries afford opportunities for growth. Driving and restraining forces towards growth can be internal or external to the individual, relationships, organizations, communities, the culture, the nation, and international forces. (p. 201)

The heart of Boucouvalas' exploratory research revolves around learning in the broadest sense of the term. Accordingly, the United Nations Educational Scientific and Cultural Organization (UNESCO) conceptualization provides a meaningful framework, that is, learning not only for skills development, learning how to think and ways on knowing, learning how to be, learning how to live together, and a more recent advance: learning how to change (Delors et al., 1996; UNESCO, 2011). The European Framework on key competences for lifelong learning built on those earlier developments by UNESCO (European Commission, 2012).

The development and the implementation of the educational reforms by the Hellenic Ministry of Education, Lifelong Learning and Religious Affairs are in progress, taking the policy advice of the Organisation for Economic Co-operation and Development (OECD, 2011) into account. The new pilot curricula for primary education are available online (Ψηφιακό Σχολείο [Digital School], 2011). There is an ongoing discussion concerning the goals of the reform and whether the decisions made and the actions taken are mainly based on cost-effectiveness criteria without considering pedagogy as much. The new pilot curricula for primary education are based on UNESCO's early conceptualization of learning—(although unfortunately missing the learning how to change element that was added later)—and bring innovation in terms of encouraging educators to systematically exploit Information Communication Technologies (ICT) and Arts (Παιδαγωγικό Ινστιτούτο [Pedagogical Institute], 2011a, 2011b) in their teaching.

The dominant pedagogical framework underlying teachers' in-service training programmes and seminars is *classroom diversification*. The articulation of the theory in the teachers' training material is poor and confusing. The Hellenic Pedagogical Institute suggests "otherness in schools is the rule while its denial, even having good intentions, is a basic driving factor for discrimination" (Παιδαγωγικό Ινστιτούτο [Pedagogical Institute], 2011a, p.6). This is quite a claim to be supported by only one reference (De Cortes, 1995). As regards the implementation of *diversify teaching* the suggestion is to collect information and data about our students, offer a variety of activities that correspond to the students' different learning styles, especially support the weak students, cooperate with our colleagues who are teaching the same class to exchange thoughts, ideas and suggestions to support the students and cooperate with the parents (Meyer, 2004; PI, 2011a, p. 7; Sofos & Kron, 2010). The learning process is considered having an individualized character (De Vecchi, 2003; Παιδαγωγικό Ινστιτούτο [Pedagogical Institute], 2011a, p.6).

Pashler, McDaniel, Rohrer, and Bjork (2008) provided an extensive review of the literature on learning styles. According to Glenn (2013), Pashler et al. asserted, "No one has ever proved that any particular style of instruction simultaneously helps students who have one learning style while also harming students who have a different learning style" (para 3). Further, "For a given lesson, one instructional technique turns out to be optimal for all groups of students, even though students with certain learning styles may not love that technique" (Glenn, 2013, para 7)

The dialogue amongst the scholars continues, but what I found interesting in developing my teaching methodology was Pashler et al.'s practical piece of advice to teachers: "Teachers should worry about matching their instruction to the content they are teaching. Some concepts are best taught through hands-on

work, some are best taught through lectures, and some are best taught through group discussions” (as cited in Glenn, 2013, para 16). Sprenger’s (2003) premises are also accordant with my understanding concerning the effect that learning styles should play in the classroom. First, teachers can be learners, and learners can be teachers. We are all both. Second, everyone can learn under the right circumstances. Third, learning is fun; make it appealing. The last premise reminds me of the question raised by the European Distance and e-Learning Network (EDEN) in the description of the scope of the EDEN 2013 conference entitled “The Joy of Learning”: How can we do our best to make learning a thrilling experience for learners, including providing a sense of joy in the virtual classroom? This is a question educators need to consider both for virtual as well as for face-to-face classrooms.

Another concern as regards the Pedagogical Institute’s (PI’s) theoretical framework (Παιδαγωγικό Ινστιτούτο [Pedagogical Institute], 2011a, p.6). is the idea that learning has an individualized character. Contemporary teaching methods such as personalized learning, autonomous learning, and self-directed learning (SDL) seem appealing. Suppose that we come up with the best possible blended method that creates the “super learner.” Suppose that the development of this learner is beyond our expectations. Would this be any good for social change and social development?

Studying Boucouvalas’ publications (1988, 1999, 2009) that were focused on the complementary developmental trajectories of autonomy (individual unique independent self-sense) and *homonomy* (the greater sense of Self beyond the individual, including the meaning derived in life by being and feeling part of a greater whole) I found a solid theoretical background to develop my teaching approaches. Boucouvalas focuses on adult learning. However, Ponton, Schuette, and Confessore, (2009) apply the agentic perspective of SDL to children, pointing out that, although much of the research on SDL has been focused on adults, children are also capable of SDL. Their position is that self-direction in learning should be supported and promoted in homes, schools, and organizations for both individual and social benefit. There are some constraints, though, that will be discussed in the methods section.

Project Description

Aims & Objectives

The aim of the project is to create a community of self-directed learners and to enhance their *homonomy* referring to the meaning derived in life by being and feeling part of a greater whole (Angyal, 1941, as credited by Boucouvalas). The idea lies in the introduction of the *homonomous* (connected) Self³ as the complementary dimension to selfhood, suggesting a conceptualization of s/Self that includes both autonomous and homonomous dimensions (Boucouvalas, 1988, 1998, 2009).

Figure 1 by Boucouvalas depicts an open system of worlds within worlds, contextualizing an individual as part of greater wholes, each of which addresses part of one's homonomous identity. Figure 2 by Pyrini adjusts the visualization to the aims of the specific group of learners (six graders).

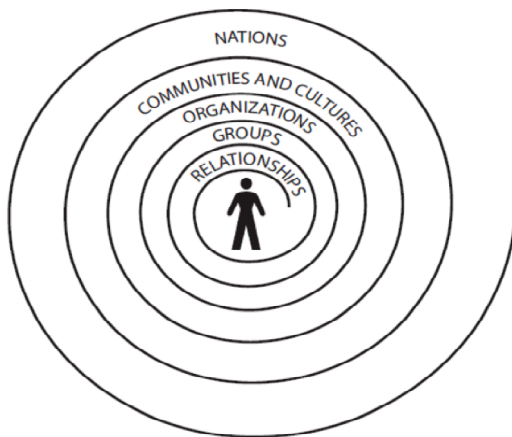


Figure 1. By Boucouvalas (2009).

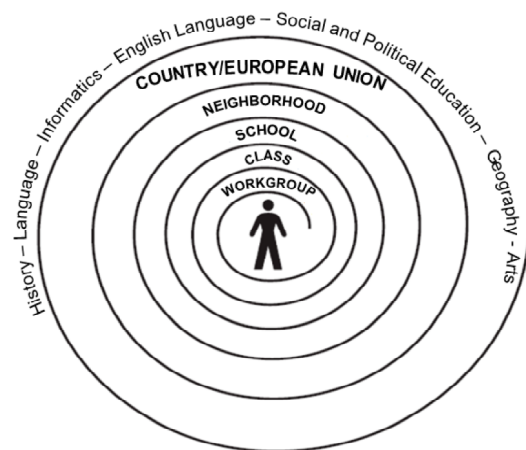


Figure 2. By Pyrini (2013).

The student is embedded in contexts that contribute to homonomous identification and development with an interdisciplinary approach. First connected with the small working group of the class, then connected with students and teachers from other classes in the school, then connected with the local community and then with the country and the European Union. The spiral may of course extend to other contexts and disciplines, but the activities of the current project will need to be restricted time-wise.

- To build capacity for group-based decision making, crisis management, tolerance, flexibility and understanding of change as well as to raise awareness of diversity, equality and inclusion in the learning processes (Learning to live together pillar).
- To build in a wiki environment a community of self-directed learners and to connect the “wiki learning community” with the school and the local community (Learning how to do pillar).
- To integrate the values inherent in homonomy into all aspects of learning and to empower students to assume responsibility for creating and enjoying their own learning environment.

More specific learning objectives are consistent with the curricula of the courses involved under the light of the adopted pedagogical approach.

The main objectives of the project are consistent with the five fundamental types of learning to provide quality education and foster sustainable human

development, specifically:

- To closely examine the Greek History in Modern Times, to expand the content of the textbook using valid historical resources, to address the content, the context as well as global issues and local priorities, to recognize that the society is in the midst of a pervasive transformation and to reflect on the ever-growing needs of the local society (Learning to know pillar).
- To well balance the homonomous and the autonomous developmental trajectories, individually as well as collectively and to deal with the well-being and the complete development (mind, intelligence, sensitivity, aesthetic appreciation and spirituality) of all members of the class (Learning to be pillar).

Theme & Interdisciplinary Approach

The theme of the project is the study of the Greek History in Modern Times that is from the Fall of Constantinople in 1453 to 1981, year of entry in the European Union. This is the period examined in grade six based on the History curriculum.

The selection of the theme arises from the “crisis” situation with which Greece is dealing. The students through their inquiries and dialogue have the opportunity to understand where we come from, learn how to recognize historical patterns and ultimately understand that the crisis is not a Greek phenomenon but a new challenge for humanity. They realize that the extent of the “homonomy levels” of individuals, communities and countries could play a critical role for the future of humanity.

Another stream focuses on the influence of education on the development of national identity during the Turkish occupation (Boucouvalas, 1995). Students need to revisit their perceptions and beliefs about their national identity in light of the identity of the European citizen.

The project is interdisciplinary since it involves fields from the curricula of Language, English Language (the working environment is in English), Informatics, Social and Political Education, Geography and Arts (Ψηφιακό Σχολείο [Digital School], 2011).

The ICT Involved

The technology available in the classroom was one laptop, one video projector and Wi-Fi Internet access, which meant that the students could not possibly work in the class even if they were to work collaboratively in groups in one station. We were unable to use the computer lab because it was occupied for the course on Informatics. The strength was that most⁴ students had access to

personal computers and the Internet at home. Another constraint was that there was no budget for the project, so we needed to use free resources.

Given that most students have extracurricular activities during the day, as well as various social and other obligations, there was a need for them to be able to collaborate asynchronously and at their own pace. Another critically important factor to consider was the students' safety and privacy. The environment would need to be free of ads, pop-ups, and only invited members should be able to access the environment.

Wikispaces afforded an environment that met all the above project criteria: a free, private and secure space for K-12 classes. Some of the features wikis offer that were important for the smooth implementation of the project are: an easy-to-use visual editor, unlimited pages, student accounts with email addresses, media and widgets from all over the Web, which help inserting material without the annoyance of ads or comments from unknown users, easy navigation, notifications by email or RSS feed, tags to organize pages and files, complete history of every edit, which helps with the monitoring of the progress of groups and individuals, wiki-, page-, and file-level permissions, simultaneous editing, project planning for group work and forums by page for contextual comments and discussions.

Method & Project Run

The duration of the project was one school year (September 14, 2012 – June 9, 2013). The continuation of the project is up to the students and is being reconsidered during the assessment sessions at the end of each unit. Students may then decide to quit the project and suggest another way of working in the History course.

The project takes place at an elementary school, in the 6th grade class of the author who co-designed the project with the students. The class includes immigrant children (8/20), and all students moved together from one grade to the next. According to the findings of the initial evaluation (test scores, interviews with the students and their parents and discussions with the teachers), the class was low performing on a consistent basis the previous years, and both students and parents had been convinced that the reason why permanent teachers would not choose to be assigned to the class was the students' low performance and bad behavior. The conclusions derived from the interviews with the students and the parents confirmed the need to run the project.

The class was formed into workgroups mainly based on the students' interests in the chapters of the schoolbook. Other grouping criteria were: diversity in groups, access to resources and access to each other (Eckert, Goldman, &

Wenger, 1997). Each workgroup undertook one or more chapters of the unit for which members needed to create a new page at the wiki⁵, develop the relevant content and deliver the presentation in the class. Each week there were two presentation sessions lasting two hours including discussion. All students were advised that they might contribute resources for the pages, and all students needed to be prepared for the discussion in order to provide feedback to presenters. Then the workgroup had the opportunity to revise the content of the page based on the feedback provided by peers and the teacher.

Students needed to move from an imposed—traditional teacher-centered instruction based on the textbook⁶—to a co-created environment—the environment of the wiki—(Bandura, 1997) that requires a greater degree of agency (Ponton et al., 2009). They needed to collaboratively create content, deliver presentations, assess the quality of the information in terms of accuracy and relevance and revise the content according to the feedback received by their peers and their teacher. Workgroups needed to coordinate actions and develop monitoring processes as they were holding the responsibility of the presentation towards the class. This is a pretty demanding effort even for adults. Some additional difficulties that young students may need to deal with are the lack of personal resources—that create both situational and structural impediments, the need to learn the rudiments of effective social interactions—for instance provide their feedback without insulting their peers, and the need to manage hormonal changes with behavior in light of peer interactions (Ponton et al., 2009). Furthermore, students need to understand the group (workgroup and class) dynamics and develop insights concerning what is happening at each moment, address problematic situations and resolve conflicts. These challenges are equally arduous for adults.

Assessment Framework

A main aim of the project was to create a community of self-directed learners. Consequently, the cornerstone of the assessment process is self and peer assessment (Eckert, Goldman, & Wenger, 1997). The students have kept and are keeping notes on the feedback they receive from their peers and their teacher—who in this case is considered as just another member of the group—and taking action to either revise the page or improve their performance in delivering a presentation. The teacher monitored the progress of workgroups and individuals in the wiki environment (maintaining a complete history of every edit and email notifications about the progress of discussions). At the end of each unit there was a reflection session where the students discuss the progress of the workgroups and individuals and the learning experience per se. The teacher documented all processes by keeping a diary and taking photos and videos.

Two external evaluations were planned and implemented: one by the

Educational Advisor (February 4, 2013) and one by an expert in the field (February 22, 2013). The Educational Advisor visits schools for monitoring and assessment reasons. He does not necessarily visit the classrooms for observations or other kind of interaction with the students. In our case he had been asked specifically to visit our classroom during a presentation session and then dialogue with the students on the project in order to provide us with the necessary feedback for the improvement of our work. As our external evaluator we invited a scholar of international credit, Dr. Marcie Boucouvalas. The criterion was to receive feedback from the person who has actually set the theoretical framework under which we are working. The truth is that this is a very rare opportunity. We needed to know to what extent she could see her theory being implemented in our project.

Assessment Outcomes

Meeting with the Educational Advisor

The Educational Advisor visited our school on February 4, 2013. He was obviously skeptical concerning the use of ICT to such extent. He asked the students some difficult questions such as “How are you ensuring participation?” “How are you evaluating the effectiveness of your presentations in terms of the learning outcomes?” “Are you aware of the dangers and risks using the Internet?” and many others. Indicative of the ownership the students felt of the project was the way they were defending it in front of the Educational Advisor. They were adding to their fellow students’ responses trying to demonstrate every positive aspect of their work; they shared responsibility as well as credit. The Educational Advisor eventually congratulated them but this was well earned having “fought” for the project for about 45 minutes.

Meeting with the External Evaluator

The external evaluator visited the class on February 22, 2013. Quotes from her written feedback follow.

In their history lessons (divided into working teams) they studied, among other matters, the centuries of the Turkish occupation period in Greece, the struggles but also the triumphs of the human spirit and related matters to the present day too. They learned to explore further resources, independently on they’re own, for their continuing learning and seemed to do so with eagerness. They posted their ongoing inquiry to a wiki. Pyrini had introduced them not only to the technology per se but also to lessons in how to present material in a manner for others to read. Moreover, they learned oral delivery skill in addition, since they presented their material to the class. All class members had an opportunity to preview each other’s material on-line via the wiki and were ready with questions and constructive criticism

on presentation day— proceeded over the days, weeks, and months by Ms. Pyrini's lessons on how to give and receive feedback in a constructive manner.

From a distance I was able to view their progress on the wiki as the days, weeks, and months progressed. A refinement process was clearly evident—even with regard to citing reference material and resources used. I was quite impressed to see their evolving mastery with bibliographic citation principles, many of which my graduate students are still mastering.

It was during February 2013, however, when I had the opportunity to visit their class in action that what I had “witnessed” from a distance came to life and was validated beyond my expectations. It was not just the knowledge and skills that I observed in action, but equally the sustainability of a vibrant, caring, and growing learning community that had developed. As I entered the classroom I was greeted by a refreshingly healthy energy-field. Even the shy ones were included in what seemed to have started as a collection of very different individuals who had now become a group, with a group identity that transcended even the group itself.

We introduced ourselves and Ms. Pyrini had something unique and positive to say about each child. Two were prepared to share their historical research that they had posted to the wiki. It was then that Ms. Pyrini introduced “Murphy’s Law.” The wiki was down for maintenance! The first thing I noticed, however, was the manner in which the class dealt with disappointment. They helped each other. One young girl actually reached out to one of the presenters, at first nonverbally, then verbally in a soft voice asking if he wanted to step out of the room for a few minutes; she saw the potential for tears and embarrassment for the young man. He had spent so much energy and time on the project and wanted to show it. The experience was a credit to the kind of environment Ms. Pyrini had created—one of caring, respect, but also the freedom to speak. Also, the class was able to adapt to not having the wiki as a visual device and carried on.

Miraculously, in a short time, the website that hosted the wiki resurrected and we were able to continue with the planned program. The unexpected interruption, however, offered an opportunity for spontaneous discussion that provided ample evidence for how the “high tech-high touch” combination created not just a good learning experience, but nourishment of lifelong self-directing learners who can both work together in a team as well as learn independently on their

own, a stellar combination sorely needed in our current world—that is, evidencing the growth of more “self” confident learners who also developed a greater sense of “Self.”

The dialogue that arose afforded an opportunity for all of us to ask questions as well. One young man shared that in the beginning of the year he had low thoughts of himself as a learner reinforced, it seems, by his environment. Many in the class expressed similar sentiments. Now, however, he has “learned how to learn.”

Of the questions I asked a few were memorable, primarily based on the discussion that ensued: (a) What has the experience been like for you this year? (b) How did you become such a cohesive group, (learning so much and supporting each other)? (c) What would you say to others who might want to create such a learning community? (d) What have you learned that adults can apply to their lives as well?

They echoed a similar sentiment to the first question—to quote one young man: “It was gradual, but [at some point] we blasted off.” When I asked what was the fuel that led to the “blast off” he enthusiastically responded “ΕΜΕΙΣ” US ... reminding me of the Lao Tzu quote: When the best leader’s work is done, people remark, “We did it ourselves.” Also, they would want to tell adults to sometimes step back and not think of being #1 always. Sometimes the group [i.e., greater sense of Self] is more important.”

Monitoring Process by the Teacher

The tracing of the developmental process of both individuals as well as the group has been long and laborious. I kept a daily log of the academic progress as well as all the nuanced dynamics occurring in the class, which produced a plethora of data to analyze, while also remaining vigilant and bracketing any potential bias on my part. Observations were documented on a daily basis and patterns were allowed to emerge from the data. Documented as well were observations from students as this effort produced a living learning community where self-evaluations, both of individual, as well as team, and group dynamics, were raised to a level of awareness and discussed.

The paper may only focus on some very basic elements. Students and working teams progress but not at the same pace. Therefore the teacher needs to be aware of the advancement of each student and each group constantly. Some students develop “expert skills” and then they act as “advisors” to the groups in the particular fields (i.e., peer-tutoring and peer-assessment). Students effectively share personal resources in the group

and in the class. Working teams measure to check the quality of their performance by giving the class short written or oral tests, which they mark and calculate the average of the class as an indicator of the knowledge gained. Working teams very soon (by the end of November 2012) realized not only that the wiki pages should include content to study, but also that the presentations should be vivid and keep the audience engaged. As a result, they became very creative inserting art elements in their presentations that were both educative and entertaining. Such art elements were photos, paintings, engravings, gravures, poems, songs, cartoons, parts of novels, theatrical plays, and movies. Based on those elements, the class was very often performing, either prepared or unrehearsed, and they enjoyed enormously doing so. Gradually they managed to create their own works of art to embed in their pages and presentations.

The need to connect with the school, the local community, the country and the European Union induced supplementary activities such as (a) the presentation of a subject from the local history to other classes of our school, (b) the organization of an open event on the same subject at the Municipal Library supported by the teacher, the school principal and parents, (c) the participation in the Educational Festival, to be held at the end of the school year (June 8-9, 2013), organized by the Municipality, where students will be available throughout the event at a kiosk to present a poster on the project having available laptops to demonstrate the wiki pages, and (d) the participation and contribution in the European programme “Bringing Europe to School Teachers (B.E.S.T.)”.

Conclusions

The goal of the project to develop a larger sense of Self and establish a learning community has been achieved. The wiki, and generally the use of technological tools, helped catalyze the process. Based on the incipient nature of this inquiry, further inquiry may be warranted to discern the extent to which the positive learning outcomes can be attributed to the use of ICT tools, nature of the teacher’s instruction and the way wikis are used to promote learning through a community.

The pilot nature of the effort offers insights garnered that will, hopefully, be of use to others, extends an open invitation for dialogue about the use of wikis and a call to share experiences, successes, concerns, caveats, cautions, potential, etc.

Future plans involve thoughts about piloting other environments, for instance, virtual environments for the creation of a community of self-directed learners in primary education based on the lessons learned from this project.

Notes

1. The title of the exploratory research is “Adult Learning for Societal Development in Greece: A collaborative exploration of driving and restraining forces in understanding and applying UNESCO CONFINTEA VI results ...and beyond.”
2. The crisis Greece is going through is not just a financial crisis. It has many different aspects and many different levels. Boucouvalas suggested in her Fulbright proposal that at minimum, the financial crisis has catalyzed a social crisis of such proportion that a society is in the midst of a more pervasive transformation.
3. For Boucouvalas, self with a lower case “s” refers to one’s separate individual self, while Self with a capital “S” refers to the expanded connected sense of Self, represented by homonymy.
4. The class consisted of ten boys and ten girls. At the beginning of the project one student had Internet access but no access to a personal computer (until January 2013) and one student had a personal computer but no Internet access (until October 2012).
5. The link to the wiki is <http://st-history.wikispaces.com/>
6. During the initial assessment interviews, the students stated that this was the only teaching method they had experienced in the History course.

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