

DISTANCE-BASED TEACHER TRAINING FOR THE PEDAGOGICAL UTILIZATION OF ICT IN TEACHING PRACTICE: AN EMANCIPATORY ACTION RESEARCH OF AN ELECTRONIC LEARNING COMMUNITY

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Abstract

This is a presentation of a critical-reflective action-research that attempted to investigate some processes and outcomes of learning and practical experience gained by two teacher teams participating in an in-school distance-based training program concerning the pedagogical utilization of ICT as a tool for educational development and transformation of the school culture. The findings of this study arise from specific case studies that adopted a multi-method analytical approach.

INTRODUCTION

Current developments associated with our globalized world, sets new challenges and demands for educational change. Therefore, in approaching teaching and learning for a sustainable future, current pedagogy theories and practices provide support for philosophical directions and policies that view teachers and students as active citizens and critical thinkers (Kostoula-Makraki & Makrakis, 2006). Information and Communication Technology (ICT) could play a significant mediating role towards this direction, particularly in developing innovative teacher training programs. Having in mind that, especially in our country, there is lack of appropriate and sufficient training policy and action for pedagogical utilization of ICT through teachers' professional empowerment (Raptis & Raptis, 2006), we have been led to the design and application of a blended teachers distance and in-school training model that combines teachers' technological alphabetism with some socio-constructionist and critical-reflective training through the use of a web-based learning platform in combination with some face-to-face learning encounters.

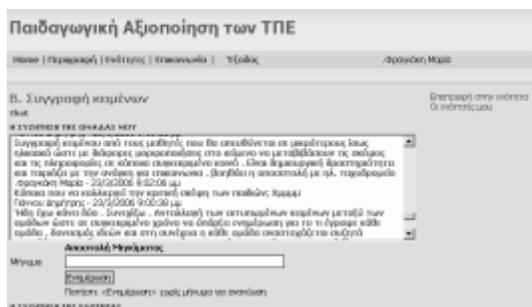


Figure 1: Web-based learning platform (Chat-room)

This model has been integrated in the program named “EPICT.-Esperides”, implemented by the Laboratory of “Informatics in Education” of the Department of Primary Education at the University of Athens, in association with some other international and private sector agents. (1). This action research-oriented educational study aims at exploring and understanding:

- the participant teachers' personal “theories” (positions, cognitions, skills, views, ideas, attitudes etc) on teaching and learning
- the relation of their theories to their educational practice and
- if and how they potentially change as a result of the particular training (i.e. the quality of this transformative process)

THEORETICAL/ CONCEPTUAL RESEARCH FRAMEWORK

The planning of the program, the educational material of the Electronic Learning Community as well as the teaching/training action-research are based on the principles of the critical-constructive and critical-reflective

pedagogical and epistemological approach to education and learning as well as on the adult/teacher education principles, arising from the learning theories that support Electronic Learning Communities. Among the various learning theories, three are viewed as most appropriate for the study of our students being in a spatial or time distance and task-oriented collaboration via internet. First of all, the socio-cognitive and constructivist in nature, “Activity theory” which constitutes an experiential, open and integrative approach to human action and learning, has been adopted (Engestrom 1987, Bodker 1991, Nardi 1996, Bellamy 1996, Jonassen 2000). Emphasis has also been placed on “Distributed Cognition” as it focuses on the social, cultural and material context (artifacts, environment) through which learning is realized (Rogers 2000, Halverson 2002) as well as on the theory of “Situated Learning”, according to which learning is a process related to its activities, object and socio-cultural environment in which it takes place (Brown, et al 1991, Wegner 1998). The principles of adult education (Rogers, et al, 1998) have been taken into serious consideration while the emancipator elements of our philosophy have been integrated in our critical-reflective teaching model which emphasizes the social and ethical dimension of education. (Kostoula-Makraki & Makrakis, 2006).

METHODOLOGICAL RESEARCH FRAMEWORK

The methodological approach of this training intervention is based on a framework of diagnosing and generating didactic change guided by critical-reflective action-research with an emancipatory approach to knowledge:

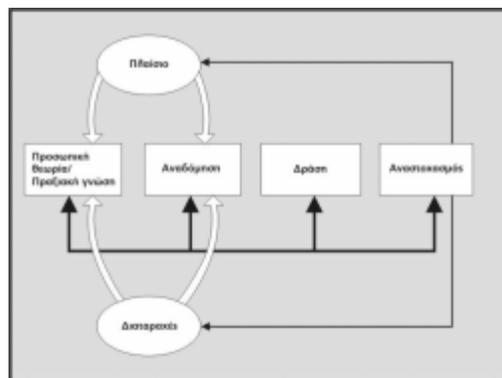


Figure 2: A framework of diagnosing and generating didactic change (Kostoula – Makraki & Makrakis, 2006, p.211)

Based on this framework, the process of diagnosis and generation of the teachers' instructional self-development begins with eliciting the teachers' personal theories it goes on with the identification of their contradictions or juxtaposition with their current educational practices as well as their general theoretical assumptions on teaching and learning in a social context. (The context is defined as the specific work environment of the teachers, as well as, the greater structural, political, social and cultural environment, in which teachers work). Through the above critical reflective analysis and self-exploration it is possible for them to discover potential latent misconceptions and dissonance between various elements of their personal theory as well as between their educational declarations, on one hand, and actual practices, on the other. Through this self-observation - and often painful - process - teachers are led to the elaboration and transformation of their theories and “established” views and practices. In this active process, the idea of “critical enlightenment” is implemented mostly through the collaboration of the participant teachers with their “external associates”, ie, the training facilitators. The latter operate as “critical”

as well as supportive friends who, during the whole adult education instructive process, assist the participant teachers to express thoughts, beliefs, cognitions, worries and elaborate an action plan, in a collaborative way, aiming at their professional and personal development and self-improvement. The new resulting insights involve ideas for action referring to teaching and learning, teachers' role as well as school's social role and mission. Most of the teachers' instructional designs are applied in classrooms, analyzed by both teachers and facilitators and then improved for later use. This has contributed to their designing skills development.

In this ethnographic training intervention, two teacher teams were formed (of three people each) from two geographical areas of Greece. The researcher functioned as a "critical facilitator" as well as a training coordinator. The selection of the teachers was based on their voluntary participation. In the present research two different types of triangulation are applied:

- 1) **Methodological triangulation:** use of multiple data collection methods and tools (Figure 3 & 4): Study of: a) interactions during face-to-face teaching, various dialogues developed via a web-based communication and learning platform, certain personal research files (calendar, notes, portfolio) as well as b) some qualitative interrelations between personal data of an initial questionnaire and some elements of the teachers' transformative process.



- 2) Combined triangulation levels, utilization of more than one level of analysis, in particular, using three basic levels often employed in social sciences, i.e. the individual, the interaction level and the collective activity level (Cohen & Manion, 1994). The analysis of qualitative data is held through Grounded theory (Strauss & Corbin, 1990) and the data analysis of teaching actions is based on Van Manen classification (1977). The latter falls into the following categories: 1) pedagogy: how we teach (methodological approach), 2) detailed program: what and when (teaching approach), 3) political – ethical dimension of teaching and 4) social-critical dimension: who is the acting agent or who benefits.

Outcomes of the training process

Although, the research activities are still in progress, some preliminary results revealed are the following:

- 1) **Personal theories / operational cognitions.** Regarding personal theories and contradictions with their educational practices and general views on teaching and learning, participating teachers present a mix of humanistic and traditional, pseudo-behavioristic approaches to teaching and learning. Besides the fact that they value student-centered teaching principles, in class, they follow teacher-centered educational practices. They feel so distressed with the current teaching practices and the overall conditions in the educational field that they get discouraged in their daily practices and face hindrances that leave no room for pursuing innovative visions. With respect to the pedagogical utilization of ICT, teachers start by following teacher-centered methods coupled with rather meaningless and activities of a lower learning level. They express positive criticism on distance-based teaching model via Electronic Learning Communities, but they also express fear of the communication with the trainer being impersonalized. Thus they favor blended learning and seek for some more "humanizing" way of communication.

- 2) **Reformation of personal theories.** Based on the critical-constructionist approach of studying the whole process, data analysis revealed that participating teachers were beginning to realize: 1) a lot of contradictions or distortions regarding their theories in relation to their educational practices 2) various political aspects of the teaching-learning process as well as some of their action systemic or personal constraints for innovatory interventions in class and their sources 3) The need to search for transcending ways to designing and acting. 3) that there was as much to learn for themselves in the process of teaching through the use of ICT, as there was for pupils, and that which they needed most was the opportunity to develop theoretical experience in practice supported by experienced facilitators, encouraging institutional leaders as well as co-operative, friendly partners in their learning communities.

- 3) **Relating new insights to action.** By gradually deconstructing and reconstructing their own personal operational theories and overcoming obstacles, teachers developed new insights and experience concerning designing their students' active participation, connecting learning content and methodology to micro-level social and political issues and integrating social action in learning activities. While revising their own role in overcoming existing hindrances, on one hand, and finding out ways of pedagogical use of ICT in educational practice, on the other, teachers, started to learn how to use computer systems as emancipatory tools for their own development as well. After trying hard to overcome communicative problems that arised between each other and through their engagement in some co-operative, critical and discovery learning practices, they became much more capable of designing complex learning scenarios and activities through which they started to "develop fundamental technological and mostly pedagogical skills concerning the utilization of computer tool facilitations, as well as, the opportunity of creating a productive, co-operative and constructivist learning environment". They also begun to learn how to "translate instruction in terms of their pupils' activities rather than merely focusing at what to tell to them and how to control their students' uniformed content of learning and classroom interaction". They "now feel more confident about initiating innovation" and have realized that their "main hindrances are lack of pedagogical experience and persuasion skills on how to make it seem legitimate and significant to our partners" (2)

CONCLUDING REMARKS

In conclusion, the teachers participating in this professional development intervention, realizing the non-conformity between their personal theories/

operational cognitions, attempt didactic changes, while taking advantage of various opportunities offered to them by ICT. Within this framework, teachers' approaching ICT is not limited to its mere technical dimension but is rather attempted in a way that enhances the emancipatory and transformational aspects of their pedagogical role. This provides an ethical and political meaning to the teachers' initiatives and actions while attempting to operate as catalysts of change in the system (Fullan, 1991).

Notes

- (1) EPICT is a trans-national, distance teachers training program on the pedagogical use of basic ICT tools which adopts an in-service model of adult education in a cooperative context. Having been further developed, it is under a pilot study in collaboration with Lambrakis Institution.

- (2) Quoted from a participant teacher's diary.

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