Exploring Adult Digital Literacy Using Learners’ and Educators’ Perceptions and Experiences: The Case of the Second Chance Schools in Greece

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ABSTRACT

The research reported in this paper aspires to shed light into adult digital literacy using learners’ and educators’ experiences and perceptions at Second Chance Schools, a project in Greece aiming at combating social exclusion through education. In exploring the above, this investigation uses a case-study approach within a qualitative paradigm and draws upon a heuristic that brings together a set of ideas on adult program development to guide research techniques and analysis procedures. The latter focuses on five key elements of program development for adults: needs identification, planning, design, climate, and evaluation. The findings identify the importance placed by the participants on digital literacy and indicate some tentative points and practices that, when suitably adapted, could pave the way for effective preparation and delivery of digital literacy courses for adults.

Keywords

Digital literacy, Teaching and learning practices, Adult and lifelong learning

Introduction

Information and Communications Technologies (ICT) play a central and pervasive role in our modern age, permeating every aspect of our social life, such as workplace, education, public services, economy, administration, healthcare, entertainment, and culture. The tremendous growth of new technological environments is considered a driving force that transforms our world into a global, universal society. ICT affects our lives and everyday relationships as well, from accessing a wide range of information and interacting with public services to working from home, from collaborating with colleagues to communicating with friends, and from receiving education from distance to political participation.

In the framework above, computer literacy is recognized as an important skill for the 21st century work force and the learning society (European Commission [EC], 2000a; EC, 2001). Educational policy directives and initiatives in most developed countries have articulated clear and unambiguous statements about integrating ICT in everyday education practice in order to inform citizens about the knowledge and skills needed to participate in the 21st century’s knowledge society. ICT is also considered the driving force for widening adults’ participation in learning and lifelong learning initiatives (Gorard, Selwyn, & Madden, 2003; Mason, 2006), facilitating flexible learning in terms of time and distance, and thereby establishing opportunities and conditions for a “learning society” for all (EC, 2000b; 2001; 2003).

Improving adult digital literacy levels is fundamental in the sense that it bridges the digital divide and confronts the issues of exclusion and marginalisation that accompany the increasing importance of ICT-mediated activities in modern social life. According to Selwyn, Gorard, & Furlong (2006, p. 1), “mapping how ICTs and ICT-based learning fit with the everyday lives of adults is a vital task for the research community.” During the past decade, a great number of studies have investigated various groups of people regarding their attitudes and beliefs toward computers, such as students, teachers, adults, etc. (for example, see Knezek & Christensen, 2002; Sugar, Crawley, & Fine 2004; Jimoyiannis & Komis, 2006, 2007). Most of the investigations have revealed four correlated dimensions (Jimoyiannis, 2008): anxiety, fear or caution regarding computer use; self-efficacy and confidence in the ability to use ICT; liking use of computers and ICT tools; and perceptions about the value and the usefulness of ICT use in personal life.

It seems that the development of students’ ICT expertise has a basis in strong internal motivation and in intensive use of ICT, both at school and at home (Ilomaki & Rantanen, 2007). Undoubtedly, young people who have grown up with computers, mobile phones, and the Internet are not fearful of technology and they are willing and open to experimentation with new ICT applications and facilities. In contrast, adults’ learning habits, their notional barriers
about new computing systems, their technical difficulties in using ICT, and, finally, their attitudes toward ICT seem to be different from those of high-school or university students (Chua, Chen, & Wong, 1999; Wilfong, 2006).

However, while research worldwide has proved that adults need digital skills (Selwyn, 2004a; 2004b), limited empirical evidence has been directed to digital literacy teaching approaches and the associated pedagogy (Kambouri, Mellar, & Logan, 2006; Jimoyiannis & Gravani, 2010). As Probert (2009) suggests, school teachers’ understanding of information literacy and the associated classroom practices constitutes an open research subject. In addition, adult educators are faced with many peculiarities and complicated situations that describe the digital literacy framework, namely learners’ pre-existing knowledge and learning habits, their lack of time and personal computer, and their attitudes and social representations about ICT as well.

Understanding more about adult digital literacy constitutes the fundamental purpose of this study, which seeks to shed light on the educational reality at the Second Chance School (SCS) program in Greece. The investigation presented is justified, given the importance placed on ICT by both the EU Commission and the Greek government, the fact that adult digital literacy is an under-researched field, and the central role of digital literacy in the curriculum of adults education in SCSs. It aspires to extract from the findings those practices that, when suitably adapted, could pave the way for effective preparation and delivery of digital literacy courses for adults. The ultimate purpose of this paper is to contribute to the discussion regarding the design of adult digital literacy courses and programs.

Second Chance Schools and digital literacy

The SCS project was funded by the EU and the Greek State in light of the Commission’s 1995 white paper, Teaching and learning: Towards the learning society (EC, 1997), aiming to propose actions that combat social exclusion. In addition to Greece, the SCS pilot projects have been initiated in eleven more EU countries (Jimoyiannis & Gravani, 2010). In particular, the projects have been initiated in cities that have both concentrations of detrimental socio-economic factors and a strong potential for mobilizing the local players. A network linking all these projects has been set up, enabling an exchange of experience and best practice between different pilot sites and participants.

In Greece, the SCS project constitutes a flexible and innovative educational program (Jimoyiannis & Gravani, 2010), which provides lower secondary education to adults aged 18 and over who have not completed the nine-year compulsory education. It aims at combating the social exclusion of individuals who lack the qualifications and skills necessary to meet the contemporary needs of the labour market. The program lasts 18 months, divided into two stages of nine months each (two academic years). The weekly schedule covers 21 teaching hours, taking place during the afternoons. Forty-eight schools have been established and operate all over the country, while three SCS operate within prisons.

SCSs are characterized by an open and flexible curriculum that is significantly differentiated from the one followed in formal schools, in terms of principles, content, teaching methods, students’ learning activities, and assessment. Multiliteracy is the key concept that forms the basis for the development of the program of studies, while adults’ interests and the wider social environment are the critical factors determining the written and the oral word (General Secretariat for Adult Education [GSAE], 2003). The core of the learning subjects is mainly developed around three interrelated literacies, namely, language literacy, numeracy, and digital literacy. In particular, the curriculum of SCS is determined by three main objectives (Jimoyiannis & Gravani, 2010):

- to develop adults’ skills in language, mathematics, and communication, with special emphasis on foreign languages and ICT. (The basic subjects are Greek, mathematics, digital literacy, English, social education, environmental education, aesthetic education, technology, and the physical sciences)
- to offer basic training and preparation for their professional life in cooperation with the local authorities
- to develop adults’ skills in the domain of their personal interests, such as, for example, sports, music, theatre, etc.

In SCSs, teaching and learning activities are seen as a communication act rather than an effort to achieve predetermined goals. According to this, the learning activities are not drawn up in advance; rather they draw upon the basis of students’ individual needs. Therefore, learning is not seen as a process of knowledge transmission. The teaching and learning practices should promote personalized teaching, experiential learning, self-motivation, students’ active involvement and decision making, critical thinking, and more. Educators and students have the
The role of digital literacy in the curriculum of SCS is vital, since it aims at helping adult learners to achieve the following:

- acquire the necessary technical knowledge and skills to use ICTs effectively
- be competent in using ICTs to solve problems of everyday life
- understand the social dimensions and the impact of ICTs in our modern society
- cultivate positive attitudes regarding ICTs and face at the demands of modern age.

In the framework above, digital literacy is considered in a broader view than computer use and familiarization with various ICT environments (hardware devices, software tools and applications, digital content, etc.). In other words, it refers not only to the knowledge and skills of using a wide range of ICT environments but also to those skills related to accessing, processing, analyzing, evaluating, applying, and communicating information (content) so that adults will be able to participate as active members in the so-called knowledge society (EC, 2000a).

**Methodology**

This study is based on the experiences and perceptions of the participants to unveil the processes of adult digital literacy teaching and learning in the context of the SCS. A qualitative case-study approach within the phenomenological mode to the selection and analysis of the data was adopted (Bogdan & Biklen, 1982). Four broad case studies were used for the purpose of this research. These were the four oldest SCS programmes run in Greece (Acharnes, Peristeri, Agioi Anargyroi, and Ioannina). The replication logic (Yin, 1984) was followed in the selection of the cases explored. According to this, each case is selected so that it either a) predicts similar results or b) produces contrary results but for predictable reasons.

However, selecting the setting and context of research is not the only decision required. In case studies, decisions involve internal sampling as well, which involves decisions about with “whom to talk.” With regard to choosing participants for the study, it was decided to take an opportunistic sample. According to Miles & Huberman (1994), an opportunistic approach to sampling involves every individual in the population to have an equal chance of being selected. For this study, 24 adult learners and 8 educators were selected. The learners ranged in age from 23 to 57 and varied in their adult life stages. There were 21 women (the majority of the learners attending SCS are women) and 4 men, with varying employment status. The educators, one woman and seven men, were all permanent secondary-school teachers in ICT and varied in their profile. They ranged in their teaching experience in schools from 2 to 15 years. Their prior experience in adult teaching in SCS or/and elsewhere also varied from zero to hundreds of hours.

The tools employed for the collection of the data include in-depth, audio-recorded, semi-structured interviews carried out over a two-month period. The researchers carefully designed the interview process. They were well trained, and guarded against personal biases by recording detailed field notes, which include reflections on subjectivity, to ensure validity of responses. In particular, the semi-structured approach has the advantage of retaining its main objective of eliciting equivalent information from a number of informants, thus allowing a comparative analysis of responses between different groups of subjects. Moreover, it provides a more flexible style that can be adapted to the personality and circumstances of the persons being interviewed and permits the researcher to probe and expand the informants’ responses (Hitchcock & Hughes, 1989).

Interview schedules were prepared for learners and educators. Examples from the agenda included questions related to the factors that influenced the adult teaching and learning of ICT in this particular context, such as the social and education context of the program, the feelings and emotions triggered, the “conceptual inputs” that participants brought into the courses. Participants were interviewed separately in a setting, and at a time that was convenient and comfortable for them. Most of the interviews took place in classrooms. Each interview lasted between 45 minutes to an hour. Prior to the interview, the researchers had contact with the respondents and explained the aims, nature, utility, and contribution of the research in order to establish a rapport with and gain the trust and respect of the respondents. For the purposes of clarity, adult learners and educators in the study are referred as learner 1, learner 2, etc. (through to learner 22) and tutor 1, tutor 2, etc. (through to tutor 8).
The data analysis was completed in the spirit of hermeneutics and involved the deployment of the constant comparative method, whereby categories and their properties emerged from a detailed sententious analysis of the data. For the purposes of illustration a heuristic was used to structure the early stages of data analysis. This draws upon a set of ideas that cohere under the rubric program development developed by Gravani and John (2005). The heuristic is represented in Figure 1.

Figure 1. Representation map of the heuristic

The inner circle represents the key unit of analysis: adult educators and learners. The second circle and its parts suggest the program elements that guided the collection and analysis of data. There were five major themes, namely, needs identification, planning, design, climate, and evaluation, linked to the elements of the guiding heuristic. The outer circle and its segments show some traits that orient the organization and analysis of data. Data were indexed, and various themes that seemed to be related to the five organizing concepts outlined in the guiding heuristic were identified. Themes that emerged along with the relevant quotes were then sited under the five concepts. This was the process of coding (sorting) data into categories, according to the commonalities that they share. The emergent categories were then turned into a series of codes that were applied to the corpus. These were derived from an iterative reading of the data and guided the validity of the wider emerging themes. This process comprised three sub-components: naming, comparing, and memoing. The themes were then contextualised by placing them in correspondence to the literature through the process of theoretical memoing (Locke, 2001). The final accounts were illustrated by using the most telling pieces of data, which evoked the original words of the participants.

As criteria upon which the soundness of this research is judged, we used four constructs that reflect the assumptions of the qualitative paradigm:
- **Credibility.** The study transcripts were returned to the participants to ensure that the transcriptions made were as close to the original as possible.
- **Transferability.** The findings of the study often have an influence on practice through the “phenomenological exchange,” whereby learners and educators engage in a mutual recognition of similar instances.
- **Dependability.** The researchers have fully explained in the analysis new ideas and further lines of questioning that emerged in the course of the investigation.
- **Conformability.** The findings were constantly discussed with the heads of the SCSs explored and presented at conferences.

### Analysis and interpretation

#### Needs identification

Identifying the needs for learning involves deciding which procedures will help learners responsibly and realistically determine what they need to learn. The results of this study show that the educators placed great importance on putting into practice a mechanism for mutual needs identification. All of them, with one exception, argued that they tried to find out their learners’ experiences, perceptions, preferences, and needs of the ICT course in the first class meeting. Half of the educators also mentioned that, prior to the meeting, they were informed about their learners’ profile through the head and other colleagues. This was a requirement since each student had to be seen as an individual, according to the SCS regulations, which argue for educators to develop curricula derived from the exploration of students’ needs.

Indicative is the following quote from the interview with an educator with two years of experience in the SCS and a limited experience with adults. He argued the following:

> In the SCS the curriculum for the ICT course is developed during the academic year in the light of the preferences, needs and prompts given by our students…I discuss the course content with them and I try to ensure a climate of mutual trust and profound communication (Educator 5).

The majority of the learners in the study (19 out of 24) confirmed that their educators were keen on negotiating with them the ICT course content. However, educators pointed out that the adult learners could only help them to a certain extent since they did not have any knowledge in the use of ICT. A few of the learners (7 out of 24) had some experience in ICT and only two had their own computers at home before entering the course. The majority of the students (20 out 24) also admitted that they were even scared of personal computers, due to their age and fear of technology, and were reserved at the beginning of the course. Characteristic is the following quote from the interview with a 34-year-old woman who joined the SCS aspiring to get the certificate, which would help her to get a better job. She commented as follows:

> Educators wanted to find out what we wanted out of the course, but unfortunately we couldn’t say much, given our small experience in technology. It was my first time with a computer and I wasn’t feeling very comfortable. I had doubts whether I could make it (Learner 11).

#### Planning

Planning is concerned with the setting up of the framework of the program. A cardinal principle of andragogy is that a mechanism must be provided for the involvement of all the parties in the planning of any educational enterprise (Brookfield, 1986).

From this starting point, adult learners’ and educators’ experiences regarding the planning of the ICT course were explored. The analysis reveals that, in all four schools, sessions were planned in light of learners’ expectations and identified needs within the context of the principles underlining the digital literacy course, as stated in the Program of Studies, namely, ICT knowledge and technical skills, using ICT in problem solving, and the societal aspects of ICT. Findings also show that there was flexibility in the choice of topics and that learners’ profiles were taken into account when planning the sessions.
Regarding learners’ performance at each of the three areas, data show that the majority (18 out of 24) of the learners faced serious difficulties in comprehending the technical knowledge concerning various ICT components (e.g., hardware concepts like memory, processor, etc., or software concepts like information coding, files and folders, data files, and program files). On the other hand, they performed better in technical skills, such as using word processing, spreadsheets, and Internet services (e.g., Web, email etc.). They also exhibited a great interest in getting to know about the numerous ICT applications and uses in everyday life and the impact of ICT in modern society.

Interesting are the planned means used by educators to adjust the course aims to individual learners’ profiles and needs. Educators achieved this by using examples from everyday life and even from learners’ professional lives. For instance, an educator (7) stated that, in his attempt to teach spreadsheets (Excel), he used the example of a female student who runs a kebab shop:

I told my students that a very good exercise for using spreadsheets is the following: in a kebab shop I buy meat, bread, pitas etc., then I can estimate using Excel how much I buy, sell, and earn (Educator 7).

Design

Designing a comprehensive program in the andragogical model involves selecting the combination of learning units, that is, problem areas that have been identified by the learners through self-diagnostic procedures and learning formats, such as individual, group, and mass activities for learning, that most effectively accomplish the objectives of the program and arrange them into a pattern.

In the present study, data reveal that educators, to a greater or smaller extent, designed the ICT courses on the basis of problem areas and activities identified by their learners so that they could make good use of their experience and keep them motivated. As both learners and educators underlined, there was an open and flexible plan for the sessions which was under change and adjustment according to the learners’ profiles. Findings identify that ICT courses varied in all four schools, and not all the educators designed sessions of the same content and by using the same activities, paradigms, and examples.

In general terms, the findings of this study identified four different teaching and learning formats followed in digital literacy courses in the SCS: ICT competence activities, cross-thematic approaches, ICT-based projects, and individualized teaching.

ICT competence activities

The activities focused on students’ development of ICT technical skills and competence in using computers and general-purpose software. They addressed both first- and second-year students and were operated in the computer lab. Course sessions were between two to three hours per week. The students were working individually or collaboratively in pairs. In the four schools studied, the ICT competence laboratory activities took different forms. In two schools it took the form of frontistirio, a class aimed at preparing students to pass their exams for the ICT certification. In the other two schools, digital literacy was taught in conjunction with some other literacy, such as mathematics, English, or Greek. Characteristic is the following transcript from the female educator with extensive experience in teaching adults:

This year in the lab we taught ICT with Greek language. I collaborated with the language teacher and asked students to practice writing Greek with the use of the computer. Students were trained simultaneously in Word and in Greek (spelling, grammar etc.) (Educator 1).

Cross-thematic teaching

This approach involved teaching of two literacies at the same time, aiming at studying the two different subjects jointly. In the case of the ICT courses examined, data point out that cross-thematic teaching was implemented to a small extent. As 17 out of the 24 learners stated, only a few times they were taught ICT along with another subject. Learners were not in the position to explain why this happened. The majority of them even hardly understood the
significance and the value of cross-thematic teaching. Three of the eight educators argued that it was very difficult for them to develop the cross-thematic teaching practice due to various reasons, including the following:

- lack of in-service training that could help educators to implement cross-thematic practices
- lack of motivation and willingness on behalf of educators to try something new and unknown
- difficulties with colleagues
- former experiences and practices from the typical secondary school.

**ICT-based projects**

ICT-based projects target digital skills that go beyond ICT operational skills, namely, skills to search, select, and evaluate information, critical and analytical thinking, and strategic and problem-solving skills. Assignments focus on various subjects (theatre, gardening, and written essays on important everyday life topics such as environmental pollution, feeding, and health issues) that students of both stages were involved in from the beginning of the academic year. The main idea behind this learning approach is that students who participate in the cross-thematic projects are able to gradually acquire knowledge concerning various fields and transfer this knowledge to real problems and everyday life issues. For the completion of the majority of the projects, tutors encourage and support their students, first, to work collaboratively in teams, and second, to use ICT to access information from the Internet and also to practise the knowledge and skills acquired in order to produce their report or presentation of the subject under study.

A problem regarding project work, identified by both educators and learners in the study, is the lack of collaborative skills and spirit among the learners, presumably originating from their lack of previous supportive experiences. The majority (20 of 24) of adult learners argued that they preferred to work alone rather than to collaborate with others. A 56-year-old learner commented that:

> We are all adults with our own pace in learning. I preferred to practice on the computer alone rather than to collaborate with somebody else. You don't learn otherwise. Moreover, there is nothing to learn from a colleague who knows the same or less than I do; it would be different if colleagues were more experienced. I was asking my teacher for help and he was always there for me (Learner 17).

**Individualized teaching**

Individual lessons were implemented in three of the SCS explored in the study. Each SCS had its own computer lab. The labs were designed for those students who exhibited serious problems and inabilities in using computers. Most of these students had difficulties participating in ICT-based projects and even in attending the ICT-competence courses (3 hours per week).

**Climate**

Climate conducive to learning is widely articulated to be a necessary prerequisite to effective adult learning (Bickel & Hattrup, 1995; Gravani & John, 2005). Knowles (1990) talks about physical and psychological environments. The former refers to the typical classroom set-up, material infrastructure, timetable of a course, the extent to which the set-up fits individual participants, and students’ reward for participating in the program. The latter involves mutual respect, collaboration, mutual trust, supportiveness, and openness.

With regard to physical climate, findings reveal that not all classrooms used in the program were fully equipped with computers and audio-visual media suitable for adult learning. In the above context, participants felt that learning was prohibited and that the lack of appropriate infrastructure was to be blamed for some organizational problems that appeared in the program, such as the absence of the cross-thematic teaching or the few hours spent on individualized teaching.

Regarding the distribution of educational material, data indicate that no books were given in the course of the ICT sessions. This is justified on the basis of the philosophy underlying the SCS program, according to which sessions have to be adjusted to the learners’ needs. Tutors tried to meet adults’ individual needs and believed that notes,
photocopies, and other material could meet learners’ needs more effectively. The majority of the participants in the study, with four exceptions, seemed to agree with this practice. Books were not necessary since individual needs varied in all four schools and even in the same classroom. Hence, no one book could meet all identified needs. On the contrary, a number of books could be proposed or be available in the school library, in accordance to the open philosophy of the program of studies that is at the heart of the SCS.

Psychological climate was investigated in terms of the relationship between adult learners and educators and the relationships among learners. Regarding the former, data reveal that an atmosphere of mutual trust, support, openness, and cooperation was prevalent in most schools. The majority of both learners and tutors said that they felt valued and respected in the ICT sessions, which had a positive impact in the learning process. It was only at the beginning that the atmosphere was a bit cold. This was due to the negative attitudes, insecurity, or fear that some of the older students exhibited about computers and ICT. Educator 1 commented on that:

At the beginning some of them were negative to learn . . . they were saying that computers are devil’s machines and they refused to touch them . . . A female student over 50 thought that it was impossible for her to learn due to her age . . . Some others had negative impressions of the school due to their experiences of the typical school they had attended . . . In all the above cases, we’re trying to be encouraging, waiting for their (students’) disposition to change.

As far as the relationship among learners is concerned, respondents’ answers varied. Twenty out of the 25 learners claimed that relations with each other were amicable and good; the rest experienced diversity in relationships and justified this by explaining that the same relationship could not have been developed with everyone, since adults have different personalities that do not always match. A female learner (Learner 24) who was overall negative with the ICT course stressed that collaboration with her colleagues was impossible since they had no knowledge of ICT; therefore, she preferred to work alone.

**Evaluation**

Evaluation was explored in the present study in terms of reaction evaluation, that is, participants’ positive and negative feelings about the program, and learning evaluation, which links to the learning outcomes of the program (Kirkpatrick, 1998).

Learning evaluation focuses on the learning that participants engaged in during the digital literacy sessions and the perceived outcomes on the growth of their knowledge. The majority of the respondents argued that they had gained “new knowledge,” which took the form of either subject knowledge or philosophical knowledge.

As 23 of the learners stated during the course of the ICT sessions, they got to know about computers and their use and impact in everyday life. Only a small number of the adults in the sample (five) were interested in technical knowledge (for example, understanding and using computer terminology, and understanding technical specifications and internal operations of the PC, such as processor, RAM memory, hard disk, etc.). On the other hand, almost everyone wanted to obtain the necessary skills for using general-purpose software and the Internet. By the end of the sessions, learners were able to use word-processing programs, the Internet, email, and, in some cases, presentation and spreadsheet software (the extent to which they mastered these skills depended on their level of study and interest as well as on the school and tutor). All tutors stated that adults had serious difficulties developing effective representations about computing systems and concepts. However, both educators and learners agreed that philosophical knowledge was the most valuable and constructive knowledge gained from the sessions. Philosophical knowledge is interpreted as knowledge of the world, people, and behaviors. In particular, educators stated that they had learned from their learners lived experience. They claimed that they had learned to be patient and supportive with their students and to respect individual needs. They had also experienced the power of willingness, and had felt supported by their learners when needed.

Learners also gained philosophical knowledge. They talked about having learned to be persistent, patient, open, and receptive, and that it is never too late to learn and do new things provided that there is desire to do so. A 55-year-old woman stated:

In the course of the ICT sessions, I have learned to be patient and persistent. I had to ask several questions and practise hard because I was forgetting things. My memory does not help in this age.
Besides, at the beginning, I was scared of the machine . . . but if you really want something a lot, then things and life will lead you to this (Learner, 13).

Reaction evaluation involved participants’ likes and dislikes about the program. Findings revealed that individuals in the study liked almost every aspect of the program: educators, because they successfully completed their task and managed to persuade the majority of learners about the importance of ICT; and learners, because they worked out their doubts and fears and successfully finished the program. The weakest aspects of the sessions, which both educators and learners would have preferred to have been different, were first, the poor material infrastructure (lack of computers and high-speed Internet connection) in schools that did not have their own building; and second, the limited teaching hours devoted to digital literacy. The majority of the learners (20) argued that the ICT course should have been offered more than three teaching hours per week since it was a difficult, new, and useful subject that was not easy for them to comprehend.

**Concluding remarks**

The analysis pointed out some interesting issues regarding ICT teaching approaches and adult learning habits during the digital literacy sessions in the context of the four case studies that SCS explored. One of the eminent points raised relates to learners’ individuality. As indicated, adult learners’ needs, interests, learning styles, and experiences were seriously considered by the majority of the educators when planning, designing, and delivering the ICT sessions. The latter were adapted to individuals’ profiles, respected their special characteristics, and were aligned with the adult learning principle, which argues that adults’ programs and courses need to be organized on the basis of learners’ expectations, profile, and needs (Knowles, 1990; Jarvis, 2006; Gravani, 2008). The above conforms to the SCS’ Program of Studies (GSAE, 2003) and is in accordance to the initial plan and aim of the project. As Vecris and Hodolidou (2003) stated, since students at SCS are not a homogenous team, heads and teachers should not create an absolutely common education program for all students, but look for activities that allow each learner to get involved, try, develop, and reform and that extend individuals’ cognitive patterns and strategies.

In the light of the above, no single coursebook about digital literacy was distributed in all SCS schools, while educators adjusted the course material to the adult learners’ needs. They chose open-ended social-life material that was under adjustment and transformation according to the learners’ needs and desires. By doing so, they respected the individuality of their students, who came to the SCS with different lived experiences, and they connected innovation to the social conditions within which it is produced, helping students articulate their creativity, needs, and desires.

Another major theme that came out of the analysis is that ICT sessions aimed mainly at developing adult learners’ technical and social skills in ICT while exhibiting some elements of interdisciplinarity. However, this study showed that educators had difficulties implementing interdisciplinary tasks to the extent aspired to in the SCS curriculum. In addition to the above, findings pointed out some factors that enhance or hinder learning in ICT sessions in SCS, namely the learners’ age, lack of appropriate organization and material infrastructure, old habits that educators carried with them from the typical secondary school, and learners’ difficulties in collaboration and team-work. Similarly, Selwyn (2004a) lists fear of exposure, fear of technology, and even fear of failure as barriers to adult’s ICT development. Findings reveal that the friendly climate of mutual respect, trust, openness, and supportiveness developed in digital literacy classrooms had a critical impact on enhancing adult learning. Tett and MacLachlan (2008) emphasized that in learning communities where power and meaning are mutually negotiated, learners begin to recognize their personal worth and power and its impact in the wider world. It seems that learners developed digital competencies more effectively when educators use learning activities that draw upon and match learners’ interests.

According to educators, a passive way of learning and working with ICT has been experienced by the learners in some cases. They consider learners’ negative view of ICT and their lack of basic skills in literacy and numeracy as critical barriers in adopting ICT as a valuable tool and in developing their ICT knowledge and skills. However, in the course of the ICT sessions, learning to a greater extent has been active for both educators and adult learners on different levels: they both developed philosophical and pedagogical knowledge, while learners further obtained technical knowledge and skills and knowledge on the use of ICTs in everyday life. ICT educators, in turn, gained
useful knowledge from their students’ life experiences. Additionally, they learned to be persistent, resilient, flexible, and supportive.

In summary, the results of this study emphasized that adult learners comprise a population with special characteristics and traits regarding digital literacy and related learning activities. The findings can be helpful when designing, organizing, and implementing ICT courses for adults in the context of the SCS and elsewhere. It seems that many of the principles elucidated by Knowles (1990) as features of adult learners remain relevant to adult ICT learning and skills development. These include a) self-directed learning as the preferred model, b) adults’ prior experience and interests, as a rich resource for the ICT course, c) a task-based rather than ICT-centred approach, and d) the importance of the wider social context in ICT cultivation and ICT learning. There are still a lot of parameters to be identified regarding the way adult learners perceive digital literacy, their practices or difficulties when using computers, and appropriate ways for educators to support and encourage adults when learning about and with ICT. Further research is necessary to address the issues above in order to redirect future policies and strategies for adult digital literacy and ICT integration in the SCS.

References


