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Message from the Editors

Happy New Year to all colleagues and researchers. We would like to announce you that the first issue of "The Online Journal of Distance Education and e-Learning (TOJDEL)" has been published. The Online Journal of Distance Education and e-Learning (TOJDEL) has a rich nature by covering distance education and e-learning research studies. It has a mission to underline different practices and researches in different methodologies. Selected papers become a mirror for the field of distance education and e-learning by the efforts of academicians and researches. In this respect, I would like to thank to editorial board, reviewers and the researchers for their valuable contributions to the journal and this first issue.

January 01, 2013
Prof. Dr. Aytekin İŞMAN
Editor in Chief

Dear TOJDEL Readers;
Welcome to the first issue of The Online Journal Distance Education and e-Learning. As Editorial Team of TOJDEL we would like to contribute to diffuse knowledge concerning Distance Education and e-Learning.
TOJDEL and International Distance Education Conference (IDEC) are powered by TASET (www.taset.net). First IDEC hold in October 2010 in Famagusta - North Cyprus and second IDEC conference hold in December 2012 in Dubai.
TOJDEL will be published 4 times a year. TOJDEL will publish some selected proccedings from IDEC.

January 01, 2013
Dr. Cengiz Hakan AYDIN & Dr. Mübin KIYICI
Editors

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"Facts or Fantasy", Implementing Podcast Based Supplemental Instruction in An Open Distance Learning Context: The Case of The Univerisity of South Africa (Unisa)

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ABSTRACT

This study explores the feasibility of implementing a supplemental instruction (SI) programme at Unisa using audio podcasting technology. It addresses high failure and dropout rates among first-year students enrolled in "high-risk" modules. A designation of "high risk" for a module makes no prejudicial comment about the course lecturer/s or students; it merely denotes that over an extended period a sizeable number of students enrolled in these modules fail to meet the expected level of performance. The study aligns itself with Unisa's drive towards the creative use of technology, as it proposes podcasting as a channel for SI. SI is aimed at helping students registered in "at-risk" modules to develop the use of metacognitive skills and enhancing their motivation and academic performance, thus becoming more independent and proactive learners. Since participation in SI is completely voluntary, not all students might volunteer to participate. At the end of the first semester or year of implementation of SI, evaluation will be undertaken to establish whether there is a significant difference between the performance of SI participants and non-participants. Both groups of students will be invited to reflect on their experiences of the module/s. These students' participation in other interventions such as e-tutoring would not stop.

Keywords: *Podcast based Supplemental instruction, student academics support and development, 'At-risk 'modules/courses, "at risk" students, throughput rate.*

INTRODUCTION

Clearly explain the nature of the problem, previous work, purpose, and contribution of the paper. While many factors determine whether or not a student will be academically successful, students who do not complete their qualifications are a loss to the university, particularly in terms of subsidy, and to the country in terms of subsidy investment and skills production (Report to Council, 2012:21). Ideally, all students should complete their qualifications in the designated minimum time (Report to Council, 2012:21). One major challenge to achieving high throughput rates is the relatively high dropout rate of students as a consequence of many factors, some of which an institution cannot influence. Unisa has, however, embarked on a number of interventions to manage this risk and others. For instance, it has introduced the compulsory science foundation programme for students at risk within the College of Science Engineering and Technology (CSET) and the College of Agriculture and Environmental Science (CAES) and will be providing e-tutorial support to all first-year students from 2013. This programme was initiated by the College of Economic Management Sciences (Department of Institutional Statistics and Analysis, 2012). Many government policy

documents, including the recent draft policy on distance education, have highlighted the importance of universities focusing on increasing graduate output (Report to Council , 2012:13) At Unisa the pass rates at present stand at 58,63%.

Determining whether or not a student will persist with or drop out from their studies is as complex as the various contributing factors. All the same, universities have an obligation and responsibility to ensure the efficient throughput of their students. "Student dropout is the greatest in 1st year as the student feels overwhelmed and unable to cope" (Report to council, Unisa, 2011)In expressing their frustration, the Deans' Forum indicated that the first-year students' experience of Unisa as a result of not receiving study materials will increase the dropout rate of students (Unisa, 2011). Factors contributing towards high failure rates and low throughput rates, especially in open and distance learning (ODL), include delays in the delivery of study materials, differing levels of student preparedness for tertiary education, module difficulty, motivation levels, students' socioeconomic status, ineffective teachers and unavailability of funding. To the university, high dropout rates denote a risk of attrition. Unisa (Department of Institutional Statistics and Analysis, 2012:52) describes risk in three areas: a) the probability of registering for the module but not passing the exam, a risk area related to the measure of overall success; b) the probability of registering for the module but cancelling before the exam, which is a risk of attrition prior to the exam; c) the probability of sitting for the exam but not passing, which is the risk of exam failure. In this study the (a) and (c) categories of risks will be used

The aim of the study is to explore the feasibility of implementing podcast based supplemental instruction to help address the issue of high failure and dropout rates in historically difficult first year level module at the University of South Africa.

Classroom discourse has been recognized as important to the educational experience of students. "Speech makes available to reflection the processes by which they [students] relate new knowledge to old. But this possibility depends on the social relationships, the communication system, which the teacher sets up" (Cazden, 1986, p. 432). Vygotskian concepts concerning semiotics and the mediation of higher mental functioning by tools and signs (including speech and language) have been used by cognitive scientists and educational researchers (Bruner,1990, Wertsch, in Moll, 1990) to study the intimate relationships between discourse and learning. Vygotsky was concerned with how the "forms of discourse encountered in the social institution of formal schooling provide the underlying framework within which concept development occurs" (Wertsch, 1990, p.116). New concepts of classrooms and formal schooling have come of age with the advent of the use of the Internet and virtual conference forums and seminars. New forms of discourse are taking place within these virtual classrooms. Computer mediated communication involves electronic discourse. This is a written form of communication that reads like speech acts of conversation. Davis and Brewer (1997) have referred to this quality as "writing talking" (p.2). Computer mediated communication is different from face-to-face conversations in important ways. Participation is asynchronous and often there is a time lag between the initial posting of a message and the responses it generates. Interactivity can be delayed by minutes, hours, days. Every participant has equal access to the conversational floor and turn taking is never an issue. Software formats delineate each participants' contribution as a separate entity and it is listed in the order received. Speakers within these conversations are not able to talk over or interrupt another. Participants are able to refer back to previous speech acts within a discussion thread in ways that face-to-face experiences never afford. Conversations are scripts that are archived and saved as transcripts. Claims have been made "that the electronic medium exercises a democratizing influence on communication" (Herring, 1992, p.250). This claim is the focus of this study. If opportunities to engage in reflection and conversations are opportunities for learning, it is vitally important to be aware of the patterns of discourse being used in this new medium of communication. Is it really true that there is more equality of participation in discussions and with the lack of nonverbal status cues are these electronic forums classrooms where power and control do not mirror society's status quo?

Motivation for This Study

The published research on academic support offers little in the way of empirical evidence to encourage the use of PSI in ODL as an academic support strategy. Without this, it could be argued that an in-depth understanding of student academic support and development in ODL would surely be incomplete. A variety of studies have endeavoured rather to make comparisons between various strategies addressing students at risk in higher learning but very few target courses at risk. The Department of Institutional Statistics and Analysis (DISA) (2012:52) in its report entitled "Progress on Identifying Students 'At-risk' at Unisa" concluded its executive summary by indicating that "the process of identifying students 'at-risk' will further continue with the identification of 'modules at risk'".

Electronic discourse within computer mediated virtual courses supports conversations of practice and learning. There are performance features within these conversations that can be studied using the same focal lenses

used to examine face-to-face conversations. Conversations have negotiated meanings and values in either context. Is there a dominant speaker, one who contributes the most text, introduces the highest number of topics, and receives the most number of directed speech acts? What are the frames (Tannen, 1996) set within the conversations? How do the participants position themselves within the conversation, within the discussion group? Are particular stances sex class (Tannen, 1996) linked? Are there participants who are not "listened" or attended to?

What Supplemental Instruction is

SI avoids the remedial stigma often associated with students at risk. It is a proactive academic intervention given to students before learning problems occur, as it is implemented in the first two weeks of resumption of lectures, providing academic assistance during the critical initial six-week period of the academic semester, before students face their first major examinations. It is during this period that attrition from courses is high (Unisa, 2011). SI use is therefore proactive rather than reactive. It is open to all students in the targeted course, and therefore pre-screening of students is unnecessary. The intervention is attached directly to specific courses. While some of the students participating in SI may be achievers or under-prepared, internal motivation is an integral component of students who participate in the SI programme as they are self-regulated. SI programmes are designed to provide and promote a high degree of student interaction and mutual support and to capitalise on the power of group study and the practice of collaborative learning and interaction through peer study groups.

Theoretical Underpinnings of Si And Podcasting

PSI is underpinned by the theory of social constructivism (Vygotsky, 1978). Social constructivism views learning as an active process where learners should learn to discover principles, concepts and facts for themselves (Vickerman, 2009). Piaget (1935) regarded active learning as a key element for academic success.

Podcast based SI is also underpinned by the cognitive theory of self-regulated learning (Zimmermann, 2001). One common feature is an emphasis on learners being proactive and exerting control on their learning processes and environments. Self-regulated refers to self-generated –thought, feelings and behaviours that are oriented to attaining goals (Zimmermann,2000).Learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert events that happens to them in reaction to teaching.

The theory of lifelong learning considers learning through activities that foster learning beyond a specific learning environment, be that face to face or ODL. Within this approach, it is considered that learning takes place all of the time and is impacted by the individual's environment and specific situations they encounter. According to Tough (1971)formal learning may come in two forms: intentional (through taking part in deliberate learning projects) and accidental (knowledge is obtained from world observation, conversations, TV news, newspapers, podcasts, YouTube or some confusing situations) (Naismith, 2004:3). Within this approach, learning is embedded into an individual's everyday life, which stresses the value of mobile technologies and audio podcasting in particular.

Along with the theory described above, the theoretical concept of learning and teaching support effectively explains the use of podcasting as an example of open education resources (OER). It focuses on activities that help to coordinate learners and existing resources used for learning activities within this approach. Mobile devices are seen as tools of providing course material to students, as well as information about a particular course. This approach can be applied effectively to frame the use of audio podcasting by ODL students because, according to McGreal et al. (2011), OER are normally accessed freely using the World Wide Web either on institutional sites or in organisational repositories. Course developers, teachers and instructors are principal users of OER, but there is a growing number of students who are accessing them directly to augment their learning. OER include learning objects such as modularised lessons, video and audio lectures (podcasts), references, workbooks and textbooks, multimedia simulations, experiments and demonstrations, as well as syllabi, curricula and lesson plans.

Podcast- Based SI

We propose the use of podcasting, mobile-learning technology as a channel for SI. The word "podcast" is a hybrid of "iPod" and "broadcast" (Ng'ambi, 2008:10). The *New Oxford American dictionary* defines a podcast as "a digital recording of a radio broadcast or of *similar programme".* Podcasting is a method of distributing audio files commonly in MP3 format over the internet that can be played by a number of portable media players/devices such as desktop computers, laptops and mobile phones (Mehrak & Maral, 2012).The strength of podcasts in education lies in the availability of easy-to-use free software such as Audacity. Audacity supports both the production and distribution

of podcasts and the downloading of them to computers or other mobile devices by users (Ng'ambi, 2008:10). This mobile technology provides social learning spaces other than a lecture hall, tutorials or even text. Social learning space refers to the myriad of physical and virtual resources which support student-centred, interactive learning in formal and informal contexts (Oldenburg, 1991).

Podcasting technology gives students online internet-based spaces to share and discuss their understanding and to interact socially within the SI podcasting environment. With podcasts, learning occurs during discussions between students and the SI leader, who himself/herself has reached a higher level of knowledge and experience. These students therefore benefit from one another's learning experience and knowledge. Students are socialised into understanding challenging course concepts and develop positive attitudes towards the historically difficult course, taking responsibility for their learning. In this study sharing of experiences and knowledge will be made possible through the use of myUnisa tools such as online discussions and blogs.

Podcasting provides mobile, flexible, accessible and personalised learning. By using podcasts a learner is engaged in the ongoing learning activities and thus enhances their productivity and effectiveness. Podcasting also has the capacity to enhance a learner's sense of individuality and community as well as their motivation to learn through participation in collaborative learning (Ally et al., 2009). It stimulates a learner's sense of ownership of the content as they participate actively in a variety of social, collaborative and cooperative activities – all of which are centred on the mobile learning device, cellphone, MP3 or flash disc. Podcasting addresses the needs of learners in this age of wireless communication and connectedness. It is neither teacher centred nor technology centred, but it has the learner and learning as its core. Modes of communication that were spontaneously developed by the younger generation of the 21st century are being recognised to transmit higher education (Hew, 2009).

Podcasting offers new opportunities for students' educational activities, in that it can be used anywhere and anytime (Muppala, 2007). Even though ODL students are so remote from their institution of learning or faculty, using podcasts gives them full control over and access to information downloaded on their mobile devices. One of the main advantages of podcasting is that it allows the current generation of self-regulated learners to enjoy a certain amount of freedom and independence to learn.

The spoken word can influence a learner's cognition, adding clarity, meaning and motivation and conveying directly a sense of the person creating those words (Durbridge, 1984, in Hew, 2009). Auditory learning is the most portable form of learning (Muppala & Kong, 2007). Short "bite-sized" audio clips not only fill dead-time moments amidst other day-to-day activities, but also coincide with these activities for pervasive learning that is interwoven into the learner's lifestyle. This allows for learning that takes place regardless of time and geographical location (Clark, 2007). Distance education research offers significant findings on audio instruction and its effects on learning, dating back to the use of radio and television. Earlier studies investigated the impact of audiotapes and found out that students using the tapes had lower dropout rates. Results of several large-scale studies indicate that computer-based interactive programs using audio-based instruction are effective (Barron, 2004, in Hollandsworth, 2007).

One other advantage of podcasting over other audio technologies such as audiotapes and CDs is its simplicity, convenience and time saving that it offers to learners. First, podcasting greatly simplifies the process of obtaining relevant materials. Secondly, although it is possible to use audio cassettes or CDs to convey the spoken words, the ubiquitous nature of podcasting technology makes it more convenient and easy for online students to access the podcast files in MP3 format, rather than having to mail students the cassette tapes or CDs (Unisa, 2011).

RESEARCH DESIGN

This study is both quantitative and qualitative in design; quantitatively it will use quasi-experimental design and qualitatively interpretive design.

Data Collection and Analysis

Since participation in SI is voluntary, some students might not volunteer to participate in the programme. Therefore for any targeted module there will be two groups, participants (treatment group) and non-participants (control group). Monitoring of performance of the two groups will be undertaken quarterly and at the end of the semester/year the performance of two groups will be recorded and analysed. Both groups will reflect on their experience of the targeted modules. Our assumption is that the SI participants' performance will be significantly higher than that of non-participants.

SI leader-produced podcasts will be uploaded on myUnisa for students to access by downloading through their preferred devices. Students will give feedback on the effectiveness and usefulness of podcasts through myUnisa tools such as the blog and online discussion forum. Data about the effectiveness or ineffectiveness of this programme will be collected from online discussions, coded and analysed.

Conclusion and Recommendations

The focus of this study is to explore the feasibility of implementing the use of Podcast based supplemental instruction programme at Unisa with the aim of reducing overall course "high-risk" status by improving students' performance in historically difficult modules. Even as we grapple with our proposed alternative strategy, we are not so sure whether our dream is just a fantasy or a dream than can be a reality. In our minds we are convinced though that this is a fantas"tic" idea that if concretised could turn out to be one of the real strategies to change the bleak picture of poor first year academic performance in most modules

REFERENCES

Ally, M., McGreal, R., Tin, T., & Schafer, S. (2009). Accessible Workplace Learning Using Mobile Technology. Paper presented at the CNIE National Conference, Ottawa, Canada.

Arendale, D. (2002). History of supplemental instruction (SI): Mainstreaming of developmental education, histories of developmental education. Minneapolis: Center for Research on Developmental Education and Urban Literacy, General College, University of Minnesota.

Arendale, D. (1994). Understanding the supplemental instruction model: New Directions for teaching and learning, no 60. Winter 1994,Jossey-Bass Publishers

Barron, A. (2004). Auditory instruction. In Jonassen, D (ed). Handbook of research for educational communication and technology Simon and Schuster.

Clark, R.E. (2007). A summary of disagreements with the 'mere vehicles' argument. In Clark, RE (ed). Learning from media: Arguments, analysis and evidence. Greenwich, CT: Information Age.

Department of Institutional Statistics and Analysis. (2012). Progress on identifying students 'at-risk' at Unisa. Unisa: Pretoria.

Durbridge, N. (1984). Media in course design, no. 9, audio cassettes. The role of technology in distance education. Kent, UK: Groom Helm.

Hew, D.F. (2009). Use of audio podcasts in K-12 and higher education: A review of research topics and methodologies. Education Tech Research Development, 57:333-357.

Hollandsworth, R.J. (2007). Managing the podcast lecture: A hybrid approach for online lectures in the business classroom. TechTrends, 51(4), July/August.

Martin, D.C., & Arendale, D (eds). (1992). Supplemental instruction; Improving first-year student success in high-risk courses. Columbia, S.C.: National Resource Center for the Freshman Year Experience.

Martin, D.C., Blanc, R.A., DeBuhr, L., Alderman, H., Garland, M., & Lewis, C. (1983). Supplemental instruction: A model for students' academic support. Kansas City, Mo.: University of Missouri and ACT National Center for the Advancement of Educational Practices.

McGreal, R., Olcott, D. Conole, G., Bossu, C., & Anderson, T. (2011). Issues in OER. Creative Commons Attribution 2.5 Canada Licence.

Mehrak & Maral, (2012): The role of metacognitive listening strategies awareness and podcast-use readiness in using podcasting for learning English as a foreign language. Published in: · Journal Computers in Human Behavior ,Volume 28 Issue 4, July, 2012,pages 1153-116

Muppala, J. K. & Chan, K. K. (2007) 'Podcasting and its use in enhancing course content', in CATE' 07 Proceedings of the 10th IASTED International Conference on Computers and Advanced Technology in Education, ed. V. Uskov, ACTA Press, Anaheim, CA, pp. 492–495.

Muppala, J.L., & Kong, C.K. (2007). Podcasting and its use in enhancing course content. Proceedings of the 10th IASTED, International Conference on Computers and Advanced Technology in Education. Beijing, China.

Naismith, L., Lonsdale, P., Vavoula, G. and Sharples, M. (2004) Literature Review in Mobile Technologies and Learning. FutureLab Report http://www.futurelab.org.uk/resources/documents/lit_reviews/Mobile_Review.pdf.

Ning H.K. & Downing K (2010) The Impact of SI on learning competence and academic performance: Studies in higher education.35 (8)921.

Ng'ambi, D. (2008). Podcasts for expansive learning: A case of reflective student stories. South African Computer Journal, 42.

Oldenburg, R. (1991). The great good place: Cafés, coffee shops, community centers, beauty parlors, general stores, bars, hangouts, and how they get you through the day. New York, NY: Paragon.

Paideya, V. (2011). Developing critical thinking skills in first year Chemistry through supplemental instruction learning spaces. World Engineering Education (WEE2011) 27-30 September, Lisbon, Portugal.

Piaget, J. (1935). Education and instruction. Paris: Librairie Larousse.

Report to Council, (2012:21) University of South Africa. South Africa

Rossell-Anguilar, F. (2007). Top of the pod - in search of podcasting "pedagogy" for language learning. Computer Assisted Language Learning, 20(5):471-492.

Tough A. (1971) The Adult Learning Projects: A fresh approach to theory and practice in adult learning. Learning Concepts; USA

Vickerman, P. (2009). Student perspectives on formative peer assessment: An attempt to deepen learning. Assessment & Evaluation in Higher Education, 34(2):221-30.

Vygotsky, LS. (1978). Mind in society: The development of higher mental processes. Cambridge, MA: Harvard University.

Development and Acceptance Evaluation of Personalized Classroom Response System

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ABSTRACT

Learning technology greatly modifies traditional classroom teaching methods due to the continuous development and innovation of information technology and wireless network technology. The integration of an interactive response system in traditional classrooms can improve the interaction between teachers and students; the classroom response system (CRS) can store students' response data and save assessment time. However, the current application of CRS in practice exams has many disadvantages. For example, the traditional CRS used to allow students to input their responses using small remote transmitters that send signals to a receiver and wait for other classmates to complete their responses; moreover, the CRS cannot provide adaptive individuals' supplementary information. Therefore, the study aimed to develop a personalized interactive response system (IRS) to facilitate both teaching activities and personal learning assessment in a classroom setting; students are required to use mobile learning devices (i.e. tablets as interactive tools, a platform for instant assessment, and e-readers). Through the wireless network, pop quizzes, or learning activities can be performed to increase interactions between teachers and students and conduct remedial teaching instantly. The system can shorten waiting time for students and stimulate reflection of what they learn in practice exams, increase the readability of questions, and provide privacy when answering questions. The study recruited 6th graders of an elementary school as participants to investigate the usability and users' acceptance of the system. The results indicate the differences between the traditional CRS and the personalized IRS and recommend applicable learners based on the results of the cross verification between different personality preferences and users' acceptance. The collected feedback from the participants and teachers can be referred for further studies.

Keywords: *Acceptance Evaluation, Personalized Classroom, Response System*

INTRODUCTION

The personalized interactive response system (IRS) can provide instant automatic grading results different from the traditional classroom teaching method and offer instant individual remedial teaching different from the traditional classroom response system (CRS). In addition, the personalized IRS can completely save students' records of learning process, reduce teachers' time to do inductive analysis, and promote interaction between teachers and parents to understand students' academic performance. The study aimed to develop a personalized IRS that can improve teachers' efficiency and teaching convenience in a classroom setting and increase learners' immediate learning efficiency significantly in the process of assessment to stimulate reflection of what they learn in the problem solving process. The system retained the advantages of the interaction response system and improved the disadvantages of

the assessment process in the traditional CRS. For example, the traditional CRS used to allow students to input their responses using small remote transmitters that send signals to a receiver and wait for other classmates to complete their responses; moreover, the CRS cannot provide adaptive individuals' supplementary information. Participants of the study were required to use mobile learning devices (i.e. tablets as interactive tools, a platform for instant assessment and e-readers). Through the wireless network, pop quizzes or activities can be performed to increase interactions between teachers and students and conduct remedial teaching instantly.

The current CRS tools have given a new dimension to the field of education, but there are still many challenges to overcome. The study combined tablets with back-end application system to investigate issues with regard to informal computerized assessment and a mechanism for stimulating reflection of learning in a computer assisted learning environment. The following are challenges of the common computer assisted learning system.

- Shortening time to stimulate reflection: Most learners are too nervous to completely understand exam questions and mistakenly understand that they don't possess enough knowledge to answer those questions in assessment which result in inaccurate assessment outcomes that cannot reflect on learners' knowledge level. However, with appropriate stimuli and hints, learners can reflect what they learn previously and apply the knowledge to answer exam questions correctly to yield true assessment outcomes and help examinees understand their proficiency levels. The traditional CRS used to allow students to input their responses using small remote transmitters that send signals to a receiver and wait for other classmates to complete their responses that result in losing opportunities to stimulate students to reflect and learn from the test items.

- Readability of test items: The centralized display equipment (i.e. single projectors and slides) of a computerized assisted learning system may lead to difficulties of reading projection content because of environmental factors, such as sunlight or indoor lighting, in a general classroom setting (Yan, 2007). This situation may lower students' learning effectiveness and cause bias of evaluating students' performance. Learners answer incorrectly may result from poor hardware devices, not due to teaching methods or individuals' personality preferences. Therefore, the readability of test items is very important in a computerized assisted assessment.

- Answer with privacy: The current computerized assisted learning system can display all students' correct and incorrect answers that may lead to peer pressure and increase middle and lower learning students' anxiety and depression. According to Seligman's learned helplessness theory, if students are placed in a helpless and passive condition for a long time, what they learn is inability to change the status quo and take any constructive action (Maier, & Seligman, 1976). This situation has a negative impact on students' overall learning performance; therefore, the design of the system should address privacy as a consideration.

In addition, the study aimed to develop a personalized IRS and investigate three dimensions, perceived usefulness, perceived ease-of-use, and satisfaction, of the personalized IRS applied in the Technology Acceptance Model. The results of cross verification of learning styles and users' acceptance indicated applicable learners and provided feedback from educators and system developers for further studies.

LITERATURE REVIEW

Previous studies showed that the application of the classroom response system (CRS) has other names, such as Personal Response System (PRS) and Electronic Voting System (EVS); the systems require individuals to input their responses using small remote transmitters that send signals to a receiver of the computer and then instantly present statistical results for analyzing learning situation. Cutts, Carbone, and van Haaster (2004) developed three different experimental activities to show that the EVS can enhance the consensus among students and that the company staff and students all agree that the EVS is more practical and beneficial than the traditional method. Moreover, the application of the EVS in a classroom setting can effectively promote students to provide learning feedback (Cutts, Carbone, &van Haaster, 2004). Many educational theories are based on the interactive relationships between teachers and students; however, the traditional lecture method is not conducive to the interactive relationships because students are unable or unwilling to express their opinions. The adoption of the EVS in courses allows students to respond to their teachers' instruction and questions that can alleviate barriers to the interactive relationships and increase learning effectiveness (Cutts & Kennedy, 2005). The PRS has an anonymous function helpful to increase students' participation in classroom activities and stimulate students to reflect on what they learn (Fan & van Blink, 2006). Another study pointed out that the system can rapidly collect multiple choice responses and display

participants' results so that the system is a useful tool to promote classroom discussion (Purchase, Mitchell, & Ounis, 2004). The CRS is a good interactive technology that saves students' learning records for future references of course design; the participants agreed that the technology prompt them to remain cautious and receive instant feedback on the course.

Ganger and Jackson (2003) adopted wireless PDAs as research tools and found that the use of wireless PDAs can improve the learning environment, allow students to have interactive relationships with teachers, and provide a solution of examination tools for a large course. In addition, the results indicated that the appropriate design of the optimized graphical user interface of the PDA screen can minimize tutorial which is also necessary. Researches indicated that the students who use PDAs pay full attention to the course topic that is also the moment that they lose their concentration in traditional lecture courses, and teachers replied that using PDAs as teaching tools can solve many difficulties in the classroom (Jackson, Ganger, Bridge, & Ginsburg, 2005). Some studies proposed the application of the Mobile Lecture Interaction (MLI) allows students to use personal mobile devices to ask anonymous questions and vote for questions proposed by other students so that their questions and the mostly asked questions are immediately displayed to teachers. In addition, the application of MLI in speech can increase interactions between the speaker and audience applicable for distance education to have interactive relationships between teachers and students in distant locations (Costa, Ojala, & Korhonen, 2008).

Learning styles originated from the German psychological research on cognitive style in the 1970s. McDermott & Beitman (1984) indicated that learning style is a unique way of learning demonstrated in the learning process, which includes observable strategies from problem solving and decision-making behavior. Learning styles are personal characteristics in the nature of biological development and various ways of learning that help individuals learn better. Therefore, the proposed system in the study can record learners' problem solving strategies when encountering problems, problem solving time, reflection time, and waiting time as important indicators of evaluating learning effectiveness. In addition to psychological based learning styles, the study adopted the Myers-Briggs Type Indicator (MBTI), a psychological and behavioral science-based instrument developed by Myers and Briggs, to measure individuals' personality preferences. Myers & McCaulley (1985) pointed out that individuals who have different psychological personality differences favor different majors when studying in college and selecting occupations. Personality differences and individuals' learning interests have a great impact on academic achievement. Therefore, the adoption of the MBTI instrument in education facilitates individuals to understand their personality differences and encourage educators to adapt their instruction to effectively increase teaching effectiveness.

RESEARCH METHOD

The study started with the system design and literature review to understand previous and present technical and application issues of the classroom response system, propose the system design, discuss characteristics of educational application of CRS in previous studies, investigate research questions, and conduct the experimental activity. The participants were recruited to participate in the experimental activities, take the MBTI instrument to understand their personality preferences, and fill out the Technology Acceptance Model survey. The researchers collected data from the results of the MBTI instrument, the TAM survey, and students' records in the tablets.

SYSTEM DESIGN

In addition to learning content, the most important part of the personalized IRS is devices for mobile learning. The integration of mobile learning devices (i.e. tablets) in education allows teachers to conduct pop quizzes and interactive activities and promote students to answer questions immediately. The interactive assessment technology of tablets includes multiple wireless networks; a base station coordinates the activities of the multiple wireless networks and a plurality of mobile devices (i.e. tablets). The system has two subsystems, the classroom management system for teachers and the instant feedback system for students, in the Server-Client mode. Teacher use tablets to lecture course content, interact with students' devices, and display teaching materials on the whiteboard; students use tablets for classroom learning assessment. The classroom management system is for teachers to understand students' learning process and manage classroom activities. Teachers use their personal computers to remote control students' devices. With the roll call system (the first one from the left on Figure 1), students who attend the class can be recognized immediately simply by entering their student IDs. Teachers select the desired type of assessment in the assessment mode that displays pop quizzes, exams, test items, and content for testing (the second one from the left on Figure 1). The answer mode of students instantly receives test items sent by teachers. Teachers can check students' records to understand their learning activities and records of using the system (the third one from the left and the rightmost one on Figure 1) and display all students' answers anonymously. The platform can instantly display

each individual's answer to increase teaching convenience and effectiveness; students' learning records are saved in the personalized IRS for students and their parents to check and review.

Figure 1. The screenshots of the roll call, posed question, and students' learning process.

Students use the tablets for learning and assessment. The system provides supplementary information to assist students to be familiar with objectives and learning records that help them understand their learning process. Students enter their IDs for attendance and take an assessment test when turning on the tablets. Then, students instantly receive the multiple choice items (see the first one from the left on Figure 2) from the teachers. Reading the questions on the tablets increase the readability in comparison with the tradition CRS using a single projector to display test items so that students can feel comfort in reading each test item without turning off the light. Students are able to modify their answers before pressing the button, "send", receive instant feedback to check whether their answer is correct or incorrect (see the second one from the left on Figure 2), and read test results and supplementary information to review and further understand the learning objectives (see the rightmost one on Figure 2).

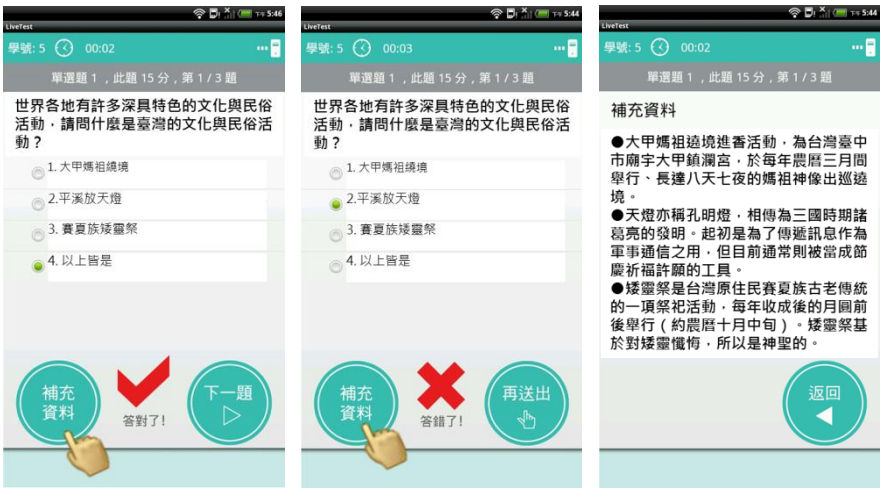

Figure 2. Check the correct answer and supplementary information and the score.

RESULTS AND DISCUSSION

The study performed the t-test to investigate differences of the personalized IRS applied in the TAM. The TAM survey items use 5-point Likert scale, and "3" indicates neutral. Therefore, the study set a critical value of 3.5 that determined the assigned value of each survey item above 3.5 indicated a positive perception on the dimensions of the TAM. The mean values of the three dimensions, ease of usefulness, ease of learning, and satisfaction, are all above 4.82; the meal value of the overall performance is above 4.85; the three dimensions and the overall performance of the personalized IRS reached the significant level ($p=.000<.001$), indicating that the participants had a significant perception on the personalized IRS applied in the TAM. The results are shown in Table 1.

Table 1. t-test of the personalized IRS in the TAM

Dimension	Mean	Std. Deviation	t-value
Ease of usefulness	4.87	.18990	69.690***
Ease of learning	4.82	.38146	33.737***
Satisfaction	4.85	.24625	53.662***
Overall perception	4.8535	.22312	42.893***

*p<.05 ** p<.01 *** p<.001

The study adopted the MBTI instrument to measure the participants' personality preferences and identify their differences. The personality preferences are Extraversion (E), Introversion (I), intuition (I), Sensing (S), Feeling (F), Thinking (T), Perceiving (P), and Judging (J). The results of the t-test reveal that the extroverts and introverts demonstrated a significant difference in the perception on ease of learning (see upper part of Table 2), indicating that the extroverts and introverts had a stronger perception on ease of learning in the TAM than the other participants in the personalized IRS. The results of the t-test reveal that the participants with a preference of Judging (J) or Perceiving (P) demonstrated a significant differences in the perception on satisfaction (see lower part of Table 2), indicating that the participants with a preference of Judging (J) had a stronger perception on the personalized IRS than those with a preference of Perceiving (P). In addition, the results reveal that the participants with a preference of Thinking (T) or Feeling (F) and those with a preference of Sensing (S) or Intuition (N) did not demonstrate any difference in dimensions of the TAM.

Table 2. Independent samples test of different MBTI learning style.

	Levene's Test for Equality of Variances		t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Independent samples test of the participants with a preference for Extraverts (E) and Introverts (I)								
Ease of usefulness	.013	.910	1.335	48	.188	.07119	-.03604	.17842
Ease of learning	32.523**	.000	2.393*	25.732	.024	.25481	.03584	.47377
Satisfaction	.459	.501	-.501	48	.619	-.03516	-.17640	.10608
Independent samples test of the participants with a preference for Judging (J) or Perceiving (P)								
Ease of usefulness	8.866*	.005	1.363	11.590	.199	.12093	-.07313	.31500
Ease of learning	7.726*	.008	1.311	11.553	.215	.23543	-.15738	.62824
Satisfaction	4.597*	.037	2.490*	12.295	.028	.24788	.03156	.46420

CONCLUSION

The study conducted the experiment that required the participants to experience the personalized IRS and the traditional CRS. The participants' response time of test items in the both systems was recorded as objective evaluation indicators; their personality preferences measured by the MBTI instrument and the results of the TAM that adopted the USE survey were subjective self-perceived evaluation indicators. The objective and subjective evaluation indicators were used to discuss the effects of the overall performance of the personalized IRS. The objective evaluation indicators, the response time of the both systems, show that the participants' response time of the test items in the personalized IRS is shorter than that in the traditional CRS. The participants that used the personalized IRS can review and reflect on the supplementary materials and didn't need to wait for the others to complete their responses so that the participants could use the class time effectively and efficiently. However, the participants' 2nd response time was longer than the 1st response time when using the personalized IRS for the reason that the participants might spend time on combining the prior knowledge with the supplementary materials before answering the same test item again which may need a further verification. The subjective evaluation indicators, the participants' personality preferences, show that the extraverts had a stronger perception on ease of learning that reached a significant level than the introverts did, consistent with the characteristic that the extraverts don't like tedious issues. In addition, the participants with a preference of judging had a stronger perception on satisfaction that reached a significant level than those with a preference of perceiving did, indicating that the participants with a preference of judging were satisfied with the goal-oriented instruction in the personalized IRS. However, the participants with a preference of Thinking (T) or Feeling (F) and those with a preference of Sensing (S) or Intuition (N) did not perceive any difference in dimensions of ease of usefulness, ease of learning, and satisfaction in the TAM. The subjective evaluation indicators, the results of the USE survey, indicate that the participants had a positive perception on the personalized IRS applied in the TAM that reached a significant level; the values of the three dimensions and the overall performance are above 4.8 out of 5. The qualitative feedback indicate that the anonymous function of the personalized IRS, the supplementary materials, the 2nd opportunity to answer questions, the clear and interesting displayed view of learning content, and the novel impression of the assessment activities increased the participants' learning motivation.

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REFERENCES

Costa, J. C., Ojala, T., & Korhonen, J. (2008). Mobile lecture interaction: Making technology and learning click. In *IADIS International Conference Mobile Learning* (pp. 119-124).

Cutts, Q. I., & Kennedy, G. E. (2005, January). Connecting learning environments using electronic voting systems. In *Proceedings of the 7th Australasian conference on Computing education-Volume 42* (pp. 181-186). Australian Computer Society, Inc..

Cutts, Q., Carbone, A., & Van Haaster, K. (2004, November). Using an electronic voting system to promote active reflection on coursework feedback. In *Proceedings of Intl. Conf. on Computers in Education, Melbourne, Australia*.

Fan, K. Y. D., & van Blink, C. D. (2006). A comparison and evaluation of personal response systems in introductory computer programming. In *Proceedings of the 2006 ASEE Annual Conference*.

Ganger, A. C., & Jackson, M. (2003). Wireless handheld computers in the preclinical undergraduate curriculum. *Medical Education Online, 8*(3).

Jackson, M., Ganger, A. C., Bridge, P. D., & Ginsburg, K. (2009). Wireless handheld computers in the undergraduate medical curriculum. *Medical Education Online, 10*.

Maier, S. F., & Seligman, M. E. P. (1976). Learned helplessness: theory and evidence. *Journal of Experimental Psychology: General, 105*(1), 3-46.

McDermott, P. A., & Beitman, B. S. (1984). Standardization of a scale for the study of children's learning styles: Structure, stability, and criterion validity. *Psychology in the Schools, 21*(1), 5-14.

Myers, I. B., McCaulley, M. H., & Most, R. (1985). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.

Purchase, H., Mitchell, C., & Ounis, I. (2004). Gauging students' understanding through interactive lectures. *Key Technologies for Data Management*, 234-243.

Yan, J. S. (2007). A study of the application advantage and prospect of the writing on the blackboard in the modern multimedia classroom. *Journal of National Hualien University of Education. 25*, 157-176.

Enhancing social interaction in massive professional English courses

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ABSTRACT

This paper describes the long way undergone in UNED, the Spanish national distance university, in the last ten years to improve our teaching of the English language with the assistance of computers and, more specifically, with the emerging web technologies. There are a number of milestones in this long way, such as the development of the aLF in house platform from the early MIT dotLearn which allowed students and teachers to engage in English only interaction, either as part of the usual educational routine or as part of teaching innovation networks, i.e., projects undertaken by volunteering students, sometimes with students from other language subjects, degrees or universities. For years all this work was written and there was little chance for students to develop their oral capabilities. The incorporation of UNED's webconferencing system and the AVIP-PRO tool enabled asynchronic evaluation of oral production and interactive skills. One of the increasing problems of UNED, the unbalanced ratio between students (300,000) and teaching staff (1,500) has found a very promising option in dynamic organization and social networks, whereby large groups are automatically split into small groups with an advanced student as monitor who assumes a number of conventional teacher's tasks, such as providing feedback, correcting errors, controlling the group collaborative dynamics, etc. The role of monitor is assigned by a rather simple procedure of social labelling, an idea half way between web 2.0 and gamification. This paper describes UNED's experiences with the application of all these technologies to English language distance learning..

Keywords: *Computer Assisted Language Learning, oral competences, evaluation, social/collaborative learning*

INTRODUCTION

In foreign language teaching, we have been familiar with concepts such as continuous formation and tailor-made courses for quite some time. The reality these days is that changes at the technological, economical, and social levels occur so rapidly that, as educators, we are obliged to offer flexible and customized learning formulae to our busy and demanding adult students. The worst case scenario here is not one where students fail their courses because of lack of time to study, but one in which they quickly drop out of the courses if their learning expectations are not satisfactorily, quickly and comfortably met. It does not seem to be reasonable to expect people to alter their busy lives and tight schedules to acquire new knowledge and skills, unless these are absolutely essential (and the corresponding courses last for very limited periods of time). Specifically, the demand for EFL (English as a Foreign Language) tuition is one that requires effective courses which allow students to start communicating more or less competently in the language from an early stage with a reasonable investment of time and effort. However, while EFL learning may involve an initially brief phase to explicitly learn the basics, the subsequent practise and perfecting processes require a large amount of time and effort on the part of the student. If he is unable to use the language as part of his working or social life, then he must turn to EFL courses to meet this need, something which, as mentioned above, his busy life

may not make possible. Given this situation, people often turn to distance learning as a way to match their personal and/or professional needs to their circumstances.

In the last few decades, distance learning has become an increasingly popular modality for adults wishing to pursue EFL studies. Such courses permit, theoretically speaking, a very large number of adults to study the language. Exact personal reasons for opting for distance learning differ but include autonomy, privacy, and the flexibility of timetables, geographical location and study rhythms that it offers (Roe, 1994). However, while such courses offer advantages to their students, they also entail certain disadvantages, including very little peer contact and access to a tutor or teacher (curiously, Mueller [2001] counts the latter among the positive aspects, since he believes that teacher-student relations are often not as positive and stimulant as everybody would like to think!). In theory, the role of the teacher in EFL courses includes preparing materials and providing tuition and feedback on the student's performance. Furthermore, peer contact provides both social interaction and academic support. However, the reality of distance EFL courses is that teacher feedback is often limited and peer contact scarce.

In the case of institutions like the UNED (*Universidad Nacional de Educación a Distancia*), which specialises in distance learning, the various English courses can have up to 15,000 students. Hence, a problem present with these courses is that, as the number of students grows, it becomes progressively harder for the teacher(s) to maintain control of the overall learning process of the group: follow the progress of individual students, identify their difficulties, providing help and guidance accordingly, introducing modifications in the way in which the materials are being studied to adapt to individual needs, etc. In this case of very high student numbers, the teacher's role is reduced to administrative tasks, being able to deal with only a very small percentage of problems that certain students present via e-mail or telephone calls (not always the ones who really require the help!). Furthermore, effective EFL learning would require the practise of interactive skills in communicative contexts, something that is obviously greatly limited in distance learning.

Computer technology has been used to try to overcome these problems. Since the invention of computers, they have proven to be good working companions to professionals, providing assistance in tasks of great volume and complexity. It is, therefore, not surprising that educational institutions like UNED have gradually adopted computing technology for most of the services they provide, both administrative (accessing information about registration, diplomas, etc.) and academic (e.g., searching for publications across libraries, listening to stored radio seminars, correcting exams!). On-line learning revolves around institutional e-Learning platforms and their related resources and tools (in the case of English language students: on-line exercise-based practice, student forums in English, videoconferences, etc.) (Pavón Rabasco & Cancelas y Ouviña, 2002; Gimeno Sanz, 2006). This paper describes the long way undergone in UNED, in the last ten years to improve our teaching of the English language with the emerging web technologies. In the next sections the milestones along this long path are presented, such as the development of the aLF in house platform from the early MIT dotLearn which allowed students and teachers to engage in English only interaction for the first time. For years all this work was written and there was little chance for students to develop their oral capabilities. The incorporation of UNED's webconferencing system and the AVIP-PRO tool enabled asynchronic evaluation of oral production and interactive skills. One of the major problems of UNED, the unbalanced ratio between students and teaching staff, has found a very promising option in dynamic organization and social networks, whereby large groups are automatically split into small groups with an advanced student as monitor who assumes a number of conventional teacher's tasks, such as providing feedback, correcting errors, controlling the group collaborative dynamics, etc. The role of monitor is assigned by a rather simple procedure of social labelling, an idea half way between web 2.0 and gamification. In the next sections UNED's experiences with the application of all these technologies to English language distance Learning are presented.

THE ALF PLATFORM AND CALL

As well as the use of general computer tools for language learning, there is also a specific line of research dedicated to the design and development of computer systems for this purpose (known as Computer Assisted Language Learning; henceforth, CALL). Paradoxically, most existing CALL programs have been designed for classroom use and require face-to-face teacher's assistance and peer participation (they are, therefore, not suitable for distance learning). Furthermore, they are mostly receptive by nature, offer only limited language production, and are used individually (which goes against the actual principle of learning a language as a vehicle for communication).

A milestone in the process of improvement the teaching of languages in UNED, and specifically EFL, has been the adoption of its Learning platform aLF. A learning platform is an integrated set of interactive online services that provide teachers and learners with information, tools and resources to support and enhance educational delivery and management (Dillenbourg, 2000). At a simple level, it could be said that platforms reproduce or simulate conventional

real-world education by integrating equivalent concepts for homework, classes, evaluation, etc., and even external academic resources. As this author puts it, platforms (also known as virtual learning environments) are the basic component of contemporary distance learning, although they can also be integrated in a face-to-face learning context (what is known as blended Learning of b-Learning).

There are very many platforms available these days. As the Centre of Computing Services at UNED explains on the institution's web site (www.uned.es), when UNED's virtual campus was started in the year 2000, a commercial e-Learning platform was initially used. With time it became evident that this system was not sufficiently flexible for the university's needs, and hence the platform aLF (a system developed by researchers in the School of Computer Science) was gradually introduced as a substitute. UNED's current own in-house platform, aLF, is a community-based learning platform developed from MIT's dotLRN. In particular, according to aLF's developers, this was selected for the following properties: "1) Virtual community approximation, 2) User centred approach, 3) Collaborative spaces, 4) E-mail centred work and 5) Technical efficiency [and also:] 1) Adaptivity, 2) Reusability, 3) Accessibility, 4) Internationalization, 5) Support for educational standards, 6) Friendly interface (more usable and accessible), 7) User tracking, 8) Blogs, 9) RSS, 10) Feeds, 11) Wiki pages and 12) Web services to facilitate the integration of external components." (http://www.dotlrn.org/users/uned). The main of aLF are on innovation in relation to on-line and collaborative learning. Modifications have been necessary and are still taking place but they do not imply a drastic restructuring of the platform, its basic structure or any of its tools for that matter.

The key concept in relation to aLF is that of *virtual community* (Rheingold, 2000) and, accordingly, its whole design is oriented to enable and promote group work (see figure 1), which is of utmost importance in EFL. As Bird (2010) says, wikis, blogs and forums appear to be best for open production written practice and for identifying individual students' error patterns. However, systematic accuracy corrections in public are probably inappropriate, so the teacher has the option of going to the Evaluation tool in aLF, where he can correct students' assignments and provide as much feedback as necessary. For learners who have a low-level of confidence or accuracy in the target language, the foreign language teacher can use the forum to get them to plan out a conversation, which they can then try out without that scaffold. For learners working at higher levels, the teacher can greater exploit forums for fluency practise, for example, by asking learners to debate a topic on the forum and use posts as stimuli for discursive writing.

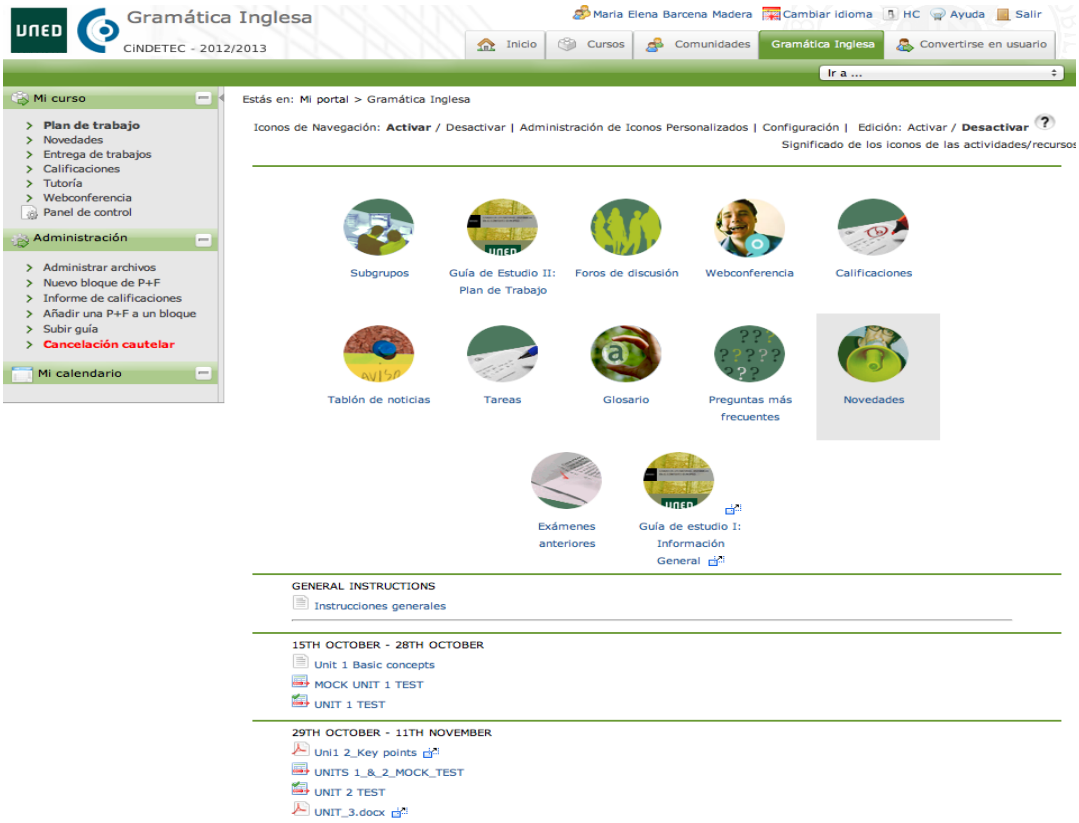

Figure 1. The virtual course of the English Grammar subject in aLF.

THE AVIP-PRO TOOL

Until the AVIP-PRO was developed for distance language learning courses in the UNED, there has essentially been little or no oral training and testing in online courses. In institutions with small numbers of students actual face-to-face oral evaluation can be undertaken, and in distance education, the telephone had been used for such purposes or even Web-conferencing tools like Skype. However, as the number of students rise and synchronous evaluation is not possible, it was necessary to develop a tool that enabled tasks to be prepared where students could undertake any kind of online oral communication and training, combining the flexibility of the AVIP framework together with the task-based structure of aLF. Institutionally, the tool is scalable and can be managed from within aLF as a standard task type enabling large-scale training and evaluation to be undertaken. Such an integration facilitates interoperability (Read et al., 2003).

The AVIP-PRO is built on the AVIP level 2+ architecture, which was developed as a web-based conferencing tool built around Flash technology. It enabled users to connect together from a standard web browser, sharing a simulated desktop environment where presentations can be used as a backdrop for an interactive video class (enabling the speaker to annotate the presentation or add any other details). Control is required for user participation (the same phenomena is present in face-to-face classroom teaching), to prevent everyone from speaking at the same time. Someone, typically a lecturer or tutor, defined as the moderator and could talk, control the presentation, and let other members of the group speak. In a similar way to the AVIP level 1 and 1+, the sessions are recorded for future use. As well as its application for standard distance education taught classes, the AVIP level 2+ is also very useful for a lecturer (or tutor) to record small video fragments illustrating some concept related to a course s/he teaches (where no other users are present in session), which can be recorded and left for student use. For example, lecturers on language courses, where students need to learn how to speak in a foreign language, can record fragments of them speaking in that language, illustrating the concepts the students are currently learning. In the AVIP-PRO, the moderating role has been removed so that any authorized student can connect to the tool, follow the instruction for a given test, and undertake the audio/visual recording for subsequent review and correction.

Figure 3. Example of the display of a student's ID card during a sesión.

The presentation and control of the task that the student has to undertake comes from the e- Learning platform in which the tool is installed (aLF). The use of the AVIP-PRO within aLF has three roles associated with it: firstly, as a lecturer or person responsible for setting up the task to be performed and evaluated. Secondly, as a student, who will undertake the activity, and thirdly and finally, as a tutor or person who will undertake the evaluation. AVIP-PRO represents a didactic tool that can be used for multiple functions, namely the training of specialized oral discourse (of particular relevance in disciplines like law and business), real-time oral evaluation (fairly common in face-to-face institutions with a reasonable student-teacher ratio) and training and evaluating second language oral competences online. Furthermore, language learning tasks can be prepared where students undertake online oral communication and training, combining the flexibility of the AVIP framework together with the task-based structure of aLF.

CONCLUSIONS AND FUTURE WORK

This paper has presented the current forms of technology-based language teaching at UNED for the development of receptive, productive and interactive written and oral capabilities. It has been explained that the institutional Learning platform was built over the enterprise information system dotLRN and that, as such, it is robust and scalable, and is actively used by more than more than 200,000 people. Over the last couple of years it has been modified and extended to be prepared for use in the new courses and degrees. As part of this work, both the general AVIP and also the AVIP-PRO tools have been integrated. The AVIP level 2+ tool can be accessed from within a course in aLF (for synchronous communication), should a lecturer or tutor wish to have a virtual meeting with the students, or to prepare a small video fragments (where no other uses are present in the session). It can also be used for asynchronous oral evaluation of large student numbers.

Finally, it has been explained that collaboration is a key concept in UNED's educational methodology as it facilitates the general mobilisation of the cognitive mechanisms underlying communication in authentic social contexts, giving rise to the development of the relevant knowledge and skills. However, the process of forming groups in such large courses must be automatic and fine-grained because, as Alfonseca et al. (2006) note, in collaborative learning the way in which students are grouped together affects the results of the learning experience.

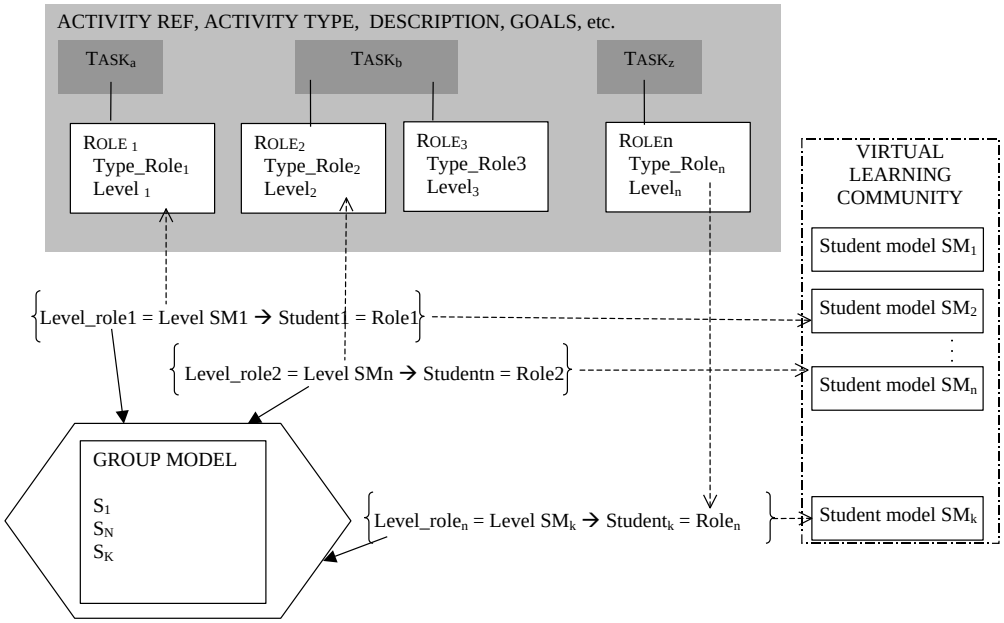

Figure 4. Adaptive group formation using collaborative templates.

The group formation process currently being explored can be seen in figure 4 above. It is adaptive in the sense that the algorithm is used to dynamically match the students available at a particular moment in the virtual community. Failure to participate causes re-allocation of students, and in the worst case, group dissolution. A fundamental aspect of collaborative group work in massive language courses is that students with a higher competence state (measured socially by peer approval/voting) are proposed for the role of student monitor. The monitoring and diagnosis of a group's work by other students in the virtual learning community is a fundamental part of the framework, for two reasons. Firstly, it enables students with higher communicative language competence states to evaluate the work being generated by lower level students, which is argued to be very reinforcing and rewarding for all involved. Secondly, it provides a solution to the computational intractability of the analysis of the

open linguistic production, particularly for the oral modality. It is believed that the implementation of this project will be a qualitative improvement in key aspects of the distance foreign language process such as student correction and feedback.

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The contents of this article are based upon previous descriptions of UNED's official platform and the AVIP-PRO tool as per Pastor et al. (2009) and Read et al. (2010).

REFERENCES

Alfonseca, E., R.M. Carro, E. Martín and A. Ortigosa (2006). The Impact of Learning Styles on Student Grouping for Collaborative Learning: A Case Study. *User Modeling and User-Adapted Interaction*: 377-401.

Bird, Ph. (2010). Creative Ideas for Language Learning with Moodle. *English Language Teaching Global Blog*. Oxford University Press. http://oupeltglobalblog.com/2010/06/01/creative-ideas-for-language-learning-with-moodle/

Dillenbourg, P. (2000). Virtual Learning environments. EUN Conference 2000: Learning in the new millennium: Building new education strategies for schools. http://tecfa.unige.ch/tecfa/publicat/dil-papers-2/Dil.7.5.18.pdf

Gimeno Sanz, A. (2006). Proyecto InGenio. Gestor de recursos para el aprendizaje de idiomas. Marco ELE. *Revista de Didáctica E/LE*, No. 2.

Mueller, R.J. (2001). Some thoughts on relationships in the classroom. Illinois Association for Educational Communications and Technology, Vol. 6.

Pastor, R., Read, T., Ros, S., Hernández, Roberto & Hernández Rocael (2009). Virtual Communities Adapted to the EHEA in an Enterprise Distance e-Learning Based Environment. In D. Hutchinson et al. (eds.) Online Communities and Social Computing Lecture Notes in Computer Science. Volume 5621. Springer, Berlin: 488-497.

Pavón Rabasco, F. &Cancelas y Ouviña, L.P. (2002). Nuestras asignaturas pendientes: inglés e informática de un modo flexible y a distancia. Pixel-bit, No. 18. http://www.sav.us.es/pixelbit/articulos/n18/n18art/art1810.htm

Read, T., Verdejo, F. & Barros, B. (2003). Incorporating interoperability into a distributed eLearning system. In Proceedings of ED-MEDIA 2003 (Association for the Advancement of Computing in Education; AACE), Hawaii, 23-28/6/2003.

Read, T., Bárcena, E., Pastor, R., Vega, J., Ros, S., Rodrigo, C., Hernández, R. & Vindel, J.L. (2010). AVIP-PRO: Oral Training and Evaluation Tool for e-Learning in the UNED. In Proceedings of EADTU: Strategies and business models for lifelong learning. Zermatt: 338-345.

Rheingold, H. (2000). *The Virtual Community: Homesteading on the Electronic Frontier*. MIT Press, London.

Roe, P. (1994). The case for distance: rethinking the foundations. In K. Richards and P. Roe (eds.) *Distance Learning in ELT*. Modern English Pub. and British Council. Macmillan, London: 54-76.

The Best On-Line Guidance Experiences in Finnish Primary School Teacher Education Practicum

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ABSTRACT

Finnish primary school teacher education is built on master level studies since the late 70´s. Teachers' profession and pedagogical skills will grow not only during university studies but also in guided training practicums in Finnish primary schools and special training schools. Never the less, Finnish school system is not problem free – approximately ten percent of new teachers will change their career in the first five teaching years. This is a strong signal about the challenges connected to teacher's profession nowadays also in Finland despite the great success in international student achievement tests (PISA). In recent years, there has been an increasing interest in supporting and mentoring just graduated teachers during the induction period. Could this be done already during the studies? This paper will focus on the final practicum period in Kokkola University Consortium´s primary school teacher education program. The purpose of this paper is to seek modern ways to guide and support pre-service teachers during their first working months in Finnish primary schools already during the late studies. In this essay we will highlight both student´s and teacher´s experiences concerning on-line quidance and support system in the final practicum period shortly before graduation.

Keywords: *Teacher education, on-line-guidance, mentoring, pre-service teacher, practicum*

INTRODUCTION

The Finnish education system offers every child an equal opportunity for education. Basic education is completely free of charge, including the teaching, all the school materials, and special needs education as well as health care and healthy school meals. According to basic education act (1998) basic education lasts nine years and caters for all children between 7 and 16 years. Schools are not allowed to select their students – this is what we call territorial or neighboring school principle i.e. every child can go to the school of his or her own school district. The Finnish educational system has also been celebrated elsewhere: for example, in 2010 Newsweek declared Finland to be the best country to live in the world. One of the key components of a good life, according to Newsweek, is education. In Finland education was ranked best in the world in this universal comparison. (Välijärvi & Heikkinen 2012, 31.)

Finnish teachers are highly qualified in all school levels. Master's degree has been a requirement since 1978 and the practicums are built in various ways than even in other Scandinavian countries. The class teacher's education in Finland is popular; the applicant numbers every year in the common entrance examination of the teacher training of Finland's universities have been approximately 5000-6500 applicant, as Meriläinen and Valli (2010) reminds us. Välijärvi (2012) points out, that teachers' professional status is still high in Finland (see also Välijärvi & Heikkinen 2012, 32). Although the salaries of Finnish teachers are according to OECD (2008) internationally only average, young people, especially young female students, find teacher's profession like a good option. In his review of the history and present of the Finnish education system, Välijärvi (2012) mentions that the students seeking to teacher training usually

make up an extremely motivated and selected group of young people.

Kokkola University Consortium Chydenius is an independent university-level teaching and research unit located in the western Finland. Kokkola University Consortium in co-operation with the Faculty of Education at the Jyväskylä University arranges primary school teacher education, leading to the degree of Master of Education. These courses are particularly aimed at persons studying through the Open University, those contemplating a change of career and those changing the emphasis of their studies in education. Following the principles of life-long learning, the courses are constantly being developed to match to the needs of individual students and the changing demands of society at large as Meriläinen and Valli (2008) highlights in their earlier studies.

Teacher education in Finland is facing a situation in which it is necessary to develop new ways to organize education according to the needs of the students and society. As Jyrhämä (2006) mentioned in her earlier study, there is an increasing demand for a more flexible teacher study program that would make it possible for students to connect theory and practice and make it visible at the same time. Wang, Odell and Schwille (2008) emphasizes in their article, how the way teacher students are prepared to teach is not always sustained by their school cultures. Ferguson-Patrick (2011) draws our attention to the fact that pre-service teachers often needs to consider the compromise between their university training and that of their school context.

According to Jokinen and Sarja (2006) the more complex, open and multiple working environment will often look really difficult and challenging to an inexperienced teacher. The new demands of work and the skills one have achieved during the studies don´t always meet in authentic situations. Even how well the teacher training system has planned, it can never give to teachers all the knowledge and skills needed in teachers profession. The novice teachers are still learning the teacher profession and they need to get support and guidance to build up their professional identity. (Look also Odell & Hulling 2000.)

So far there has been discussion about induction period in Finnish teacher education and the first working years in Finnish primary schools (see Välijärvi 2012; Almiala 2008; Kiviniemi 2000). One of the key questions for Finnish teacher education in the future is according to Välijärvi (2012) how to integrate pre-service and in-service training more effectively so as to support teacher's professional development throughout their work careers. Another important point he adds, relates to support for newly graduated teachers entering the working life. Research has shown that this induction phase, as it is called, includes many problems. (Välijärvi 2012, 8.)

LEARNING IN AUTHENTIC CONTEXTS

In Kokkola University Consortium pre-service primary school teacher education issues mentioned above are also well known. Because of that we are constantly developing all the five practicums, which belong to primary school teacher studies, to prepare students to face the teachers´ profession as authentic as possible already during the studies. This paper will focus on the final practicum, The own class practicum, where pre-service teachers begin to work in authentic school contexts. The practicum is supported, guided and mentored right to the needs of pre-service teacher; the help is pointed directly to daily issues from planning to teaching and learning as they rise from the context.

The aim of this paper is to describe in what way the practicum is organized, how the support system is built as well as analyze both student´s and teacher´s experiences concerning the guidance and support at the time of the first working months as primary school teachers. The data has been collected during the years 2010-2012 Research material (N=48) consists of:

- real time taped recordings
- practicum evaluation reports
- learning diaries
- questionnaires

Surveys such as that conducted by Kiggins (1999) have shown that after graduation, teacher students leave university with feelings of being under-prepared for life in classrooms and confused by what confronts them when they arrive at schools. Almiala (2008) find out some of the most common reasons for a professional field exchange as

follows: heterogeneous pupil material, the demanding parents and bad employment. Recent discussion in the field of education in Finland has also concerned class level group sizes, which has been seen one of the reasons for behavior and left behind problems. As Almiala (2008) states the increasingly challenging pupil material makes working pressure even challenging to teacher students in the beginning of teachers career. This view is supported by Armour and Booth (1999) who found that most schools who worked with final year primary education students felt that they needed more experience with the day to day operation of schools, and how the daily work of teachers relates to the culture of schools and classrooms.

The final practicum (extent of 8 ECTS credits) is possible to perform as a distance practicum in the municipal comprehensive schools around Finland. As a precondition to this practicum students will work full-timely as primary school class teachers and as legally competent members of the working community for at least one term lasting time period. The final practicum is the latest from five practicums carried out during the studies and performed in the end of teachers studies. The practicum lasts 2-3 months depending on how the student will schedule practicum tasks on his/her daily routines (Meriläinen & Valli 2010). This practicum is built to prepare students for authentic and contextual conditions in classroom and to meet real life challenges already during the studies when support is available not only from other teachers but also from the university.

One of common challenges emergence from the research material was the lack of collaboration among teachers. "*I´ve missed communality, collaborative planning and in generally sharing ideas and experiences. As an Early childhood educators I'm used to work as a team member and I really miss it."* Unlike other professionals who work in teams, teachers usually work alone, often as the only adult in the classroom. Even though the working culture is slowly changing, the findings show clearly that there is not enough pedagogical support available in the first working months as a teacher. This is why we have seen important to contextualize the delivery of instruction and link the instruction as closely as possible to the contexts and settings to which it applies, i.e. develop the practicum tasks as they exists in authentic conditions.

"I found the tasks really reasonable. Every task was connected straight to my work. In addition, none of the tasks seemed useless – the other way round, I felt I grew as a teacher with these tasks."

"Fist I found the tasks themselves irrelevant – as the practicum went further I understood the meaning of them more clearly."

"The term plan was maybe the most useful to me. I also found the short term plan (transdiciplinary planning via phenomenon) and the more detailed week level plans as well as tasks connected to these, useful to understand the big picture of planning."

Despite of the supported planning process, students will soon understand that schools are more than a conglomeration of buildings, people and in this case planning. As Bullough (1987) states, every school has a culture which has evolved as a response to wider cultural values. There is a huge need to shorten the gap between the university studies and the reality of everyday school life.

COLLABORATION IS THE SCHOOL AND ONLINE

According to Teacher training curriculum the aim of the Own class practicum is to develop

- larger entity of planning and teaching
- creative and meaningful pedagogical decisions concerning teaching
- assessing skills as well as differentiating skills

During this practicum, we guide, advice and support them at the time needed and make his/her operation modes as visible as possible by using online monitoring as a tool for reflecting ones procedure as a teacher.

"*Sometimes I find myself anxious, because I notice that in the beginning of my career I can't pay enough attention to issues an experienced teacher can. And the feeling that I don't understand or know what my pupils really not need nor how I can support them.*" In this kind of discussions online taped monitoring in real time has been rewarding and reasonable as one of the university lecturers argues: "*From my point of view this has been the most reasonable in online real time monitoring. Using the tapes later in guidance discussions helps students to mirroring his/her learning believes towards his/her operation culture, behavior in the class and learning tasks given to kids. This has been a great tool for develop and deepen his/her ability to reflect and make believes visible*." Unlike other professionals who work in teams, like mentioned above, teachers usually work alone in circumstances that deprive

them of an opportunity to learn from one another. Online monitoring, recordings and discussions connected to these, encourages students to look deeper ones believes and improve the quality of daily choices in teaching and guiding.

The emotional load will be the biggest naturally at the beginning of the school year in which case everything is new to the teacher: school, work, work community, pupils, parents, learning environment and physical setting of the work. In this loading situation the teacher should be able to find his/her place in the working community which has the stiff traditions. The transition to the working life requires an excellent ability to adapt oneself psychically simultaneously to very different situations of the teacher. The transition succeeds if the teacher's expectations, the realities of the job and the features of the personality agree well enough together. (Blomberg 2008, 211-212.)

The own class practicum will be fulfilled in the beginning of a new school year and a bit before that. Like Blomberg (2008) argues, the beginning of the school year is the most challenging to a new teacher. "There are so many things to keep in mind…" " I see so many lacks in my knowledge –it feels that especially in the first year I have to reread everything I´ve learned…" The practicum begins two or three weeks before the school begins – this is the time when students will orientate to the future – both theoretically and practically. The first seminar is held on-line – so that every student is prepared also technically to overcome the practicum. The lack of collaboration is said to be a common characteristic also in Finnish schools. In this practicum we have also created strategies to support collaboration to permit.

Online guidance, online discussion areas, mentoring and online seminars are places, issues and habits that will make collaboration possible and visible. Every student has a named mentor at school. The mentoring process begins in the beginning of August, when students and mentors participates together the first on-line seminar organized by university. Mentor teachers are aware of the tasks students will accomplish during the practicum. He / she will act as a role model, teacher, real time support and experienced colleague as well as one who is aware of the schools traditions. "I had a real close relationship with my mentor – our discussions have been rewarding…", "My mentor deserves a big thank you – it was important to me to know there is a person who is there for me…"In addition to mentoring, planning and sharing in teams will come true online in special discussion areas accomplished to support first working months at school. These discussion forums mirror real life net based discussion forums – although the discussion contents and guidelines are focused more detailed to practicum aims.

"Many of these tasks were helpful in planning process. Especially these two forums in net were meaningful and I felt I learned a lot from others when sharing thought and ideas. It was interesting to hear others thoughts about their students and environments. When I shared my pupil case I got lots of ideas and educational information how to deal with it. When we put our clever heads together the solutions and ideas were more unique than if I´d done it alone."

Even though some of the students as well as earlier studies (Almiala 2008; Blomberg 2008; Kiggins 2009) shows that teachers work still is mainly working alone, this practicum is built to make collaboration and its possibilities visible to teacher students. Isolated in the classroom is not the only option – using online possibilities can change the whole school culture more open and support pre-service teachers academical growth during the practicum in authentic contexts.

ONLINE GUIDANCE AND MONITORING – BENEFITS TO BE NAMED

Besides mentoring, learning tasks, online discussions and reports, there is a real time, online monitoring day included in the practicum. The student is responsible to build a monitoring area with two cameras in his/her classroom as well as to ask someone to stay in his/her class helping with the cameras during the monitoring day. Before the exact day the student and university teacher will discuss about the day, make the camera plan and test the connections. During the testing there is a lot of collegial discussion about daily issues that has risen during the practicum. This non-official discussion creates a safe and confidential atmosphere between the student and the teacher. One of the university teachers felt that online monitoring prepared her beforehand satisfyingly to orientate herself towards becoming day. *"I found it important to discuss beforehand what kind of material and how is it going to be used during the day. When my student showed me all the materials, introduced games or webpages she was going to use, I was truly in to her thoughts. This was new to me – it didn´t happen the same way when I went physically to monitor students."*

One of the most important benefits in real time online monitoring and quidance is the possibility to record discussions and monitoring. The student as well as the teacher is able to return alone or together to the taped material and reflect activities and operations later. The university teacher is able to point concrete certain issues from the recordings to make student aware of these.

During the on-line guidance developing process, there were discuss about issues that we might miss without physical attendee in the classroom as well as face to face contact when discussing with students. The research results surprised us positively: with on-line guidance system we could get benefits we couldn´t get when sitting physically in the classroom. The teaching situations were more natural, both teacher student and pupils forgot totally the monitoring and the behaviour remind the same as in normal school days. This observation made us realize more concrete the daily issues and tasks a pre-service teacher will face during his/her first teaching months and years.

The other benefits that we also found interesting and important where economical – there were a huge saving in both time and money. There was no need to travel around Finland during the practicum period any more. The save of time and money could be pointed to the guidance process which made the support system even deeper.

SYNTHESIS

During the developing process of on-line guidance in this practicum, there were discuss about issues that we might miss without physical attendee in the classroom as well as face to face contact when discussing with students. The research results surprised us positively: with on-line guidance system we could get benefits we couldn´t get when sitting physically in the classroom: the teaching situations were more natural, both teacher student and pupils forgot the monitoring and the behaviour remind the same as in normal school days. This observation made us realize more concrete the daily issues and tasks a pre-service teacher will face during his/her first teaching months and years.

Even though the growth as a teacher is a long process, we hope that our students will have at this stage an experience of the teacher profession, which is strong enough and will grow even stronger with successful teaching experiences and in-service training. When understanding the connection between the theory and one´s pedagogical way to act in one´s own class, the teacher is able to estimate her own work and is able to mirror it and its significance in the middle of different choices (see Kiviniemi 2000, 77-79).

The developing process of the practicum will still go on. The good experiences from on-line quidance as well as real time authentic monitoring will be further developed. The focus will be on how to re-use even versatile ways the taped monitoring material in guidance discussion as well as adding even more monitoring periods during the practicum.

REFERENCES

Almiala, M. (2008). *Mieli paloi muualle - opettajan työuran muutos ja ammatillisen identiteetin rakentuminen*. Joensuun yliopisto. Kasvatustieteiden tiedekunta. University of Joensuu. Faculty of Education.

Armour, L. & Booth, E. (1999). *Analysis of a questionnaire to primary educators at schools accepting students for the six week extended practicum*. Report by Faculty of Education: University of Wollongong.

Blomberg, S. (2008). *Noviisiopettajana peruskoulussa. Aloittelevien opettajien autenttisia kokemuksia ensimmäisestä opettajavuodesta*. Helsingin yliopisto. Soveltavan kasvatustieteen laitos. Tutkimuksia 291.

Bullough, R. V. (1987). *Accommodation and tension: Teachers, teacher role, and the culture of teaching*. In Smyth, J. Educating teachers: Changing the nature of pedagogical knowledge. The Falmer Press. London.

Ferguson-Patrick, K. (2011). *Professional development of early career teachers: a pedagogical focus on cooperative learning*. Issues in Educational Research 21 (2), 109-129.

Finnish Basic Education Act. (1999).

Jyrhämä, R. (2006). *The function of practical studies in teacher education*. In R. Jakku-Sihvonen & H. Niemi (Eds.), *Research-based teacher education in Finland - reflections by Finnish teacher educators* (pp. 51-69). Turku: Finnish Educational Research Association. Research report 25.

Kiggins, J. (1999). *Towards authentic context-based learning in teacher education*: The Knowledge Building Community Project. University of Wollongong. http://www.aare.edu.au/99pap/kig99590.htm. Read 11.11.2012.

Kiviniemi, K. (2000). *Opettajan työtodellisuus haasteena opettajankoulutukselle. Opettajien ja opettajankouluttajien käsityksiä opettajan työstä, opettajuuden muuttumisesta sekä opettajankoulutuksen kehittämishaasteista*. Opettajan perus- ja täydennyskoulutuksen ennakointihankkeen (OPEPRO) selvitys 14. Opetushallitus. Helsinki: Hakapaino Oy.

Meriläinen, M. & Valli, R. (2008). *Modern information technology: a possibility to create a unique practicum period.* In C. Bonk, M.M. Lee & T. Reynolds. (Eds.), Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2008. Chesapeake, VA: AACE , (pp. 1843-1850).

Merilainen, M. & Valli, R. (2010). Blended learning –flexible practicum in Primary School Teacher Education. In J. Sanchez & K. Zhang (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2010*. Chesapeake, VA: AACE, (pp. 262-269).

OECD (2008). *Education at a Glance*. OECD indicators 2008. Paris: OECD.

Prashnig, B. (2011). *Eläköön erilaisuus!* Jyväskylä: PS-kustannus & Atena.

Smith, T.M. (2007). *How do state-level induction and standards-based reform policies affect induction experiences and turnover among new teachers?* American Journal of Education 113 (2), 273-309.

Välijärvi, J. (2012). *The history and present of the Finnish education system*. Sino-Finnish seminar on education systems. Shanghai.

http://cice.shnu.edu.cn/LinkClick.aspx?fileticket=U5rzr6FYThQ%3D&tabid=11413&language=zh-CN. Read 8.11.2012.

Välijärvi, J. & Heikkinen L.T. (2012). Peer-group mentoring and the culture of teacher education in Finland. In L.T. Heikkinen, H. Jokinen & P. Tynjälä (Eds.), *Peer-Group mentoring for Teacher Development*. London and New York: Routledge. (pp. 31-40).

Wang, J., Odell, S., & Schwille, S. (2008). *Effects of teacher induction on beginner*

teachers' teaching: A critical review of the literature. Journal of Teacher Education 59 (2), 132-152.

Comparison of Reflective Thinking Profiles of Individuals using Social Networks for Education in terms of Time Variable

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ABSTRACT

Throughout the history, to find information has not been so easy but this situation has changed after development of computer and internet technology. There are some methods using technology and internet developed in the education field parallel with them. These methods developed as an alternative to traditional training methods have been improving themselves to increase the interaction between educator and student, achieve meaningful data from accumulated data that occur as a result of the data exchange. At this point, development of the information, skills, creative thinking, problem solving, reflective thinking and critical thinking of participants, students, educators and network leaders have been gaining importance day by day. To think effectively, consistently and carefully of the information, any belief or knowledge support the results aimed by them emerges as the reflective thinking. The information and the number of users is so much in social networks and this situation reveals that the reflective thinking skills should take an active role in these networks. In this study, it is aimed to bring out and compare the reflective thinking skills and profiles of the participants in social networks. A 28-item questionnaire was adapted and prepared to determine of 511 social network users' reflective thinking profiles in terms of the time variable. The obtained data were analyzed with statistical methods (t-test, frequency, percent) by using spss software.

Keywords: *social networks, reflective thinking, time variable, web-based education.*

INTRODUCTION

Throughout the history, to find information has not been so easy like today due to the development of computer and internet technology. Because of the increasing in information day by day about themselves of humans and outer world, to make sense, process and use of this information has become an increasingly important expertise area. Especially in our country, the ratio of social network usage is nearly 80-85%. Therefore, social networks are often prefered for advertising, marketing, sosyal sharing, education etc. In addition, the use of social networks in distance education environment (web-based education) as reinforcement or an educational tool is possible today. The studies about this area have been increased significantly in the last two years.

To increase knowledge and skills of the participants, students, educators and network leaders, development of creative thinking, problem solving and critical thinking have been gaining importance each passing day. Reflective thinking emerges as effective, consistent and careful thinking of a knowledge structure supporting any belief or knowledge and the aimed results of them. The information and the number of users is so much in social networks and this situation reveals that the reflective thinking skills should take an active role in these networks.

In this study, it is aimed to bring out and compare the reflective thinking skills and profiles of the participants (member, student, educator or leader) in social networks. It would be an appropriate study that detection of the reflective thinking skills of individuals who use the social networks in terms of time variable since technology has been developed so fast and interaction in educational environments should be increased. A 28-item questionnaire was adapted and prepared to determine of 511 social network users' reflective thinking profiles in terms of the time variable. The obtained data were analyzed with statistical methods (t-test, frequency, percent) by using spss software.

Social Networks

Internet-based communication tools referred to as social networks that allows to get along with humans in spite of ethnic or cultural differences, to set up groups or share our thoughts, to reach information, and information or profiles of the users are fully or partially open other users in this formation specified limits on internet (Kayışlı, Hazar & Öztürk, 2011). The widespread use of social networks brings attractive ideas for most sectors together. In a study, it is determined that 73% of 5000 participants can be linked with social networks. Moreover, 32% of the participants follow minimum one trademark, 75% of participants control mails for network notifications and every shared message reaches an average 77 friends. Facebook is dominant in the 5 of 6 surveyed countries with 88% social network usage (url-1). Social networks have the ability to be used for teaching purposes addition to offered conventional services. It is claimed that over communicating on virtual environment directs the people to some negative characteristics like non-sociality and internet addiction. The numbers of social network platforms are increasing each passing day because it is commonly used by people (Sevindik, T., Kayışlı, K. ve diğerleri, 2011).

As the world's most widely used social network platform, facebook is available in more than seventy language translations and it continues service with aiming to cover all internet users. 87 percent of 100 people of internet users in Turkey are the members of facebook and number of Turkish users has reached 30.5 million. The number of social network users nearly about 800 million with 70 different languges and average friend number of the users is 130 according to the daha determined at the end of 2011 (url-2). The statistics belongs to twitter as the second in use of social network were explained in Conference of Webrazzi Digital and it is stated in this conference that there are 7.2 million singular member live in Turkey. 5.3 million of these members actively use this social network and 1.7 million Turkish tweet are being send every day. This situation correspondes approximately 20 tweet per a second. 53% of the users are male, 47% are female. Average number of followers is 151 as a value close to number of friends on facebook (url-3).

Reflective Thinking

According to Dewey, reflective thinking skill is to think actively, constantly and carefully of any subject. Dewey determined reflective thinking as to think effectively, consistently and carefully of the information, any belief or knowledge support the results aimed by them. In addition, Dewey (1933) presented the meaning of reflective thinking in four dimensions:

1.There is a sequence based on the relations between opinions on reflective thinking.

2.Reflective thinking aims to bring positive of the feelings.

3.Reflective thinking bases the belief to some of the basics.

4.Reflective thinking requires to do a conscious research related nature, conditions and basics of a belief (Doğan Dolapçıoğlu, S., 2007 ve Kozan, S., 2007).

In terms of dimensions expressed by Dewey, it has observed that individuals in social networks establish a relationship between his own opinions and different opinions, base these opinions to some foundations of relief and reflect their feelings again on the same platform. Dewey stated that the most important requirement of the society is to reflect what they have learned in school about life. A reflective practitioner is defined as an individuals who examine assumptions and applications as well as active and stable. The attitudes owned from reflective practitioners can be summarized as open-mindedness, sincerity and responsibility (ctd. Kozan, S., 2007).

Reflective thinking gains a new dimension with today's technology and the relational aspect of the ideas emerge on the virtual environment. Reflective thinking develops faster and effectively in indivuals with the use of social network platforms efficiently. In addition, it is thought that technology could be used as a powerful tool to support the reflective thinking. Reflective practices help to evaluate learning processes of learners with allowing them to be agents of their own learnings. In this respect, one of the supports for the student during the process of problem

solving is to provide activities recognizing oppurtinity for reflective thinking and to create a stimulating and encouraging environment about this subject.

According to Dewey, problem is everything that confuse the human mind, challenge to human, obscure the belief and doesn't met before. According to Bingham, problem is obstacle that collected in order to achieve the desired goal of a person and against the existing forces. Morgan defines the problem as a conflict that is faced with frustration in achieving a goal of individual (ctd. Kozan, S., 2007). A lot of research take into consideration almost the same procedure after defining the problem. The stages of the procedure are to understand the problem with examining, perform solution plan, application of this plan and evaluation of the obtained results. It is expressed in these researches that computer softwares can be used effectively to solve problem and create an interactive environment. Based on their study, Harskamp and Suhre (2007) mentioned that thinking tips can be effective on problem solving processes of students especially in computer based education. In their research, they provided some activities as a support to reflective thinkings in order to reveal the differences between problem solving successes. They used a tool named thinking tips for supporting the reflective thinking. According to the results of this research, the experimental group is more succesful than control group (Kızılkaya, G., 2009).

MATERIALS AND METHODS

The universe of the study consists of Bitlis Eren University Tatvan Vocational High School Students who study in fall semester of 2012-2013. Randomly selected 212 females and 299 males totally 511 students create the sample of the research.

A reflective thinking scale developed by Doğan Dolağçıoğlu is adapted and used as a data collection tool. Measurement tool was ready to be implemented after adaption for the students of research group. The scale was applied to individuals using social networks on the internet by the researchers.

Spss 15.0 for Windows was used to analyze the data. Score ranges for the degree of participation in scale items are determined as follows: Completely agree: 4.21-5.00, Agree: 3.41-4.20, Partially agree: 2.61-3.40, Disagree: 1.81-2.60, Completely disagree: 1.00-1.80.

Frequency (f) and percentage (%) techniques were used for descriptive statistical analysis of the data related to personel characteristics. Reflective thinking profile of the individuals who use social network were compared by sex and, for this purpose, independent groups t test and variance technique was used for the time variable. In addition, significance level on data analysis was accepted as 0.05.

FINDINGS

In this section of the research, personel information of the students, results belong to student attitudes which obtained from reflective thinking scale and reviews of these are available. Findings obtained from the analysis of the research data are presented with tables. Table 1 shows personel information of students who are in the scope of this research.

Table 1. Statistically findings of students' personel profiles

Gender?	Frequency (f)	Percent (%)
Female	212	41,5
Male	299	58,5
How long are you using computer?		
0-12 Months	26	5,1
13-24 Months	46	9
25-36 Months	40	7,8
37-48 Months	81	15,9
49 Months and above	318	62,2
How many hours you use internet per a day?		
0-59 min.	98	19,2
60-119 min.	172	33,7
120-179 min.	92	18
180 min. and above	149	29,1
What is the reason for using social networks?		
Communication with friends	283	55,4
To obtain social environment	10	2
To make new friendships	24	4,7
To share information (source, video, audio, etc.)	155	30,3
Games and to spend time	39	7,6
Total	**511**	**100**

The findings related to attitudes which identified as a result of likert-type survey questions with responses of the individuals are included in Table 2.

Table 2. Findings related to attitudes

	N	x	SS
Question 1	511	3,8141	1,19913
Question 2	511	3,8278	1,12794
Question 3	511	3,9804	1,17307
Question 4	511	3,6301	1,21679
Question 5	511	3,5342	1,22647
Question 6	511	3,5186	1,24426
Question 7	511	3,4012	1,24204
Question 8	511	3,6732	1,13104
Question 9	511	3,4423	1,06830
Question 10	511	3,8454	1,09972
Question 11	511	3,3601	1,10591
Question 12	511	3,0372	1,20318
Question 13	511	3,4599	1,15549
Question 14	511	3,4207	1,08152
Question 15	511	3,7299	1,07076
Question 16	511	3,5323	0,88253
Question 17	511	3,8395	0,81028
Question 18	511	3,8591	0,84928
Question 19	511	3,8082	0,73459
Question 20	511	3,5577	1,13072
Question 21	511	3,5538	1,13955
Question 22	511	3,5362	1,06004
Question 23	511	3,5499	0,94400
Question 24	511	3,5205	0,96765
Question 25	511	3,6517	1,05347
Question 26	511	3,4090	1,11454
Question 27	511	3,4932	1,00169
Question 28	511	3,2681	1,10460

The results obtained with independent samples t-test about gender differences by using answers of participants are given in Table 3.

Table 3. According to gender variable

	Gender	N	x	SS	df	t	p
Question1	Female	212	3,5236	1,3435	509	-4,706	.000
	Male	299	4,0201	1,0392			
Question2	Female	212	3,5660	1,3350	509	-4,500	.000
	Male	299	4,0134	0,9121			
Question 3	Female	212	3,5896	1,3513	509	-6,601	.000
	Male	299	4,2575	0,9361			
Question 5	Female	212	3,1651	1,3823	509	-5,917	.000
	Male	299	3,7960	1,0274			
Question 6	Female	212	3,1415	1,4271	509	-5,961	.000
	Male	299	3,7860	1,0171			
Question 7	Female	212	3,1792	1,2452	509	-3,437	.001
	Male	299	3,5585	1,2175			
Question 11	Female	212	3,1698	1,0528	509	-3,307	.001
	Male	299	3,4950	1,1243			
Question 15	Female	212	3,5472	1,0632	509	-3,280	.001
	Male	299	3,8595	1,0588			
Question 18	Female	212	3,7217	0,9603	509	-3,105	.002
	Male	299	3,9565	0,7473			
Question 27	Female	212	3,6368	1,0281	509	2,747	.006
	Male	**299**	**3,3913**	**0,9714**			

Table 4 shows the results obtained with variance analysis (anova) for time of daily internet usage as an independent variable.

Table 4. The results of variance analysis for average time of daily internet usage

		Sum of Squares	df	Per squares	F	p	Significant differences *
Question 3	Between the groups	32,548	3	10,849	8,219	,000	1-4,2-4
	Within the group	669,257	507	1,320			
	TOTAL	701,804	510				
Question 20	Between the groups	32,636	3	10,879	8,904	,000	1-4,2-4,3-4
	Within the group	619,411	507	1,222			
	TOTAL	652,047	510				

p< 0,05

RESULTS AND DISCUSSION

It is determined from the responses of 211 females and 299 males participating in research that 62.2% percent of the participants have being used internet for more than 4 years. Similarly, daily internet usage is identified as 1-2 hours of 33.7% of the participants and 3 or more hours of 29.1% of the participants. The most widely used activity is social networks on internet and the aim of more than of the individuals that use these networks is to communicate with friends. Nearly 30% usage for information sharing is followed by them. Related data about these findings are available in Table 1.

According to attitude scale frequency information is given in Table 2, the average value of the participants' answers is nearly 3.58 (agree) as positive.

It can be seen in Table 3 that answers of females (x=3,5236) are obtained as agree and males (x=4,0201) as nearly completely agree to the first question "Teaching-learning process should be arranged depend on social network

participants' capabilities and needs of individuals" of scale. A significant difference was found about the organization of teaching-learning process depend on needs according to these values.

Anwers of females are agree about (x=3,5660), males are nearly completely agree about (x=4,0134) for second question "Some activities should be performed in order to determine the level of social networks participants (exam, homework etc.)". In the same way, the answers given to the third question "The results of the activities to determine the level of social network participants' learnings should be evaluated" close to the first two questions on average, and there are some significant differences between these attitudes.

While the mean of answers given by females to question 5 "In social networks, teaching-learning objectives, issues, methods and techniques of assessment should be considered when deciding over and over again", question 6 "The issues in social networks should be processed in relation to their own lives of the participants" and question 7 "I praise the participants advocates their thoughts freely in the social network environment" is nearly x=3.15 as agree, the mean of the males' answers is nearly x=3.7 as between agree-completely agree. Some significant differences was determined about these three questions.

There is a significant difference about the question 11 "I follow carefully the teaching process of participants, shares and comments about the system disruptions, provide contribution with my comments" that females answers to this question is x=3,1698 as partially agree and males answers to this question is x=3,4950 as agree. The answers of the participants to question 15 "I evaluate my strenghts and weaknesses when i participate training in virtual environment" and question 18 "I ask to myself which changes can be performed when this course is repeated, and i share my comments on social network" are nearly x=3.6 as agree for females and nearly x=3.9 as completely agree for males. At the same time, significant differences are also available.

The answers to question 27 "I consistently perform sharing in order to trace my professional progress and see my incompletes" are in agree level (x=3,6368) for females and in partially agree level (x=3,3913). The significant difference shows that females are more enthusiastic about diary.

Significant difference in terms of time variable between participants who use internet 0-59 min. in a day and 180 min. and above can be seen Table 4 in $p<0.05$ level. While participants who use internet 180 min. in a day show attitude towards between agree and partially agree (x=3,6309) for "The results of the activities to determine the level of social network participants' learnings should be evaluated", participants who use internet between 0-59min. in a day show attitude towards agree (x=4,0816). In addition, participants who use internet between 60-119min. in a day show attitude towards completely agree (x=4,2558) and significant difference is available with participants who use internet 180 min. in a day (x=3,6309).

As a result of variance analysis, it is determined that participants who use internet between 0-179 min. show attitude towards agree but participants who use internet between 180 min. and above show attitude towards partially agree (x=3,1879) for "I think on alternative methods and perspectives" in terms of time variable. This situation can be interpreted as while the use of internet increase, individuals exhibit pause on thoughts and perspectives.

In the light of the answers given by the participants, reflective thinking skills are clearly seen in the attitudes of the social networks and it is concluded that they generally meet these skills. In the same way, the attitudes towards reflective thinkings about paying attention to criticism are in agree. This situation shows that criticism is generally accomplished. Additionally, it is determined that reflective thinking behaviors about self-ratings are generally occured as similar. This situation is the indications of criticism and being open to this. The reflective thinkings about problem-solving changes between agree-partially agree and it can be considered that there are some shortcomings about this point.

The capabilities about social network usage changes proportional to period of internet usage when especially considering time variable about this. Similarly, it can be said that reflective thinking skills also increase in parallel to increasing of dominance to social networks.

REFERENCES

Doğan Dolapçıoğlu, S. (2007). Evaluation Of Reflective Thinking Level of Pre-Service Teachers. Master Thesis. Mustafa Kemal University, Hatay.

Harskamp, E. G. & Suhre, C. J. M. (2007). Schoenfeld"s problem solving theory in a student controlled learning environment. *Computers & Education,* 49, pp.822-839.

Kayışlı, K., Hazar, H. & Öztürk, U. (2011). The effect of social network on student attitudes. *III.International Congress of Educational Research. Northern Cyprus/TRNC*. pp.1062-1071.

Kozan, S. (2007). The Effect of Reflective Thinking Skill on The Source Searching and Report Writing Course. Master Thesis. Selçuk University, Konya.

Kızılkaya, G. (2009). The Effect of Web-Based Learning Environments Supported with Reflective Thinking Activities to Problem Solving. pHd Thesis. Hacettepe University, Ankara.

Sevindik, T., Kayışlı, K., Genç, Z. & Başal, B., (2011). Distance Education and Social Networs. *International Computer & Instructional Technologies Symposium, Elazığ, Turkey,* pp.1031-1036.

[url-1] Social media and E-mail Marketing, (2012). *http://www.digitalfabrika.com/sosyal-medya-ve-e-mail-pazarlamasi- infografik/* (retrieved 25 december 2012)

[url-2] Sırt, T. (2011). We have 30 Million in Facebook. *http://www.sabah.com.tr/Teknoloji/Haber/2011/11/13/ facebookta-30-milyon-olduk* (retrieved 25 december 2012)

[url-3] Twitter Statistics of Türkiye (2012). *http://1sosyalmedya.com/twitter-turkiye-istatistikleri.html* (retrieved 25 december 2012)