ABSTRACT

It has become mandatory that the teaching community acquire expertise in the computer to ensure that they cope effectively with the future demands of the knowledge society with respect to the classroom set up. Therefore, the Ministry of Education of Sri Lanka urges all teachers to receive International Computer Driving License (ICDL) training. The purpose of this study is to examine Impact of International Computer Driving License (ICDL) Training on Classroom Computer Use by Secondary School Teachers in Badulla district. Mixed method was selected as the research design. Purposive sampling has been used to select the teacher sample for this study. A sample of 85 teachers was selected from Badulla district. A questionnaire with attitude scales and interviews were the data collecting methods, and data were analyzed using both quantitative and qualitative methods, to achieve the objectives of the study. It was revealed that an average of the ICDL participants (51%) stated that ICDL training resulted in their use of new software applications in the classroom. However, the findings show that computer knowledge and skills have not affected them at all in the use of ICT in the teaching learning process among the teachers who had undergone ICDL training. It was recommended the duration for ICDL training needs to be extended. Additional vendor-specific training might be required for all teachers after obtaining ICDL certification. These findings, conclusions and recommendations would be useful to the authorities to improve ICDL training.

Keywords: Computer; Training; ICT Proficiency; ICT Skills; Software Application

INTRODUCTION

The impact of Information and Communication (ICT) on the present day world has been so tremendous that it has entered the stream of education revolutionizing every branch and stream of education to such an extent that no educational system can avoid being effected positively by ICT. Therefore, it has become mandatory that the teaching community acquire expertise in the computer to ensure that they cope effectively with the future demands of the knowledge society with respect to the classroom set up. Therefore, the Sri Lankan education system has adopted several ICT training courses aimed at improving the use of including International Computer Driving Licensee (ICDL) in the classroom. The ICDL, which is known as the European Computer Driving License (ECDL) within the European Union, is a certification attesting to basic proficiency in the use of certain types of software or computer systems (Csapo, 2002). The Ministry of Education of Sri Lanka urges all teachers to receive ICDL training and to apply for certification regardless of the subject they teach in school. The Ministry of Education considers the ICDL training an effective in-service training approach that allows teachers to acquire fundamental ICT skills. The course aims to improve teachers’ ICT proficiency at three levels: ICT skills, pedagogical skills, and curriculum training. Therefore the
main purpose of this study is to evaluate the impact of International Computer Driving License (ICDL) training on classroom computer use by secondary school teachers how the ICDL training contributes to the classroom teaching learning scenario whether ICDL training increased teachers’ professional, ICT and pedagogical skills in their day to day teaching and learning process, Whether ICDL training impact on teachers’ use of new software applications and What are the factors affects teacher use of ICT in the class room after ICDL training?

OBJECTIVES

1. To examine how teachers apply practical experiences from ICDL coursework to their teaching.
2. To examine whether ICDL training increased teachers’ professional, ICT and pedagogical skills in their day to day teaching and learning process,
3. To examine whether the ICDL training results in the teachers’ use of new software applications in the classroom and the factors that affects teacher use of ICT in the class room after ICDL training

REVIEW OF THE RELEVANT LITERATURE

According to Rad and Rezaei’s (2001) results show that short-term courses training of computer seven skills (ICDL) effect on increasing teachers professional and specialized skills and content is able to realize course objectives and evaluation was done proper with courses. On the other hand Young (2004) suggested that the ICDL assess only the knowledge and ability to use specific types of software such as word processing or spreadsheet programs. It does not assess critical thinking skills or the ability to use the software to solve research problems.

Findings of Dixie and Wesson (2001), the ICDL modules cannot be used for complete IT proficiency education because of the failure to incorporate critical thinking skills and theory into the instruction.

Abuhmaid, 2011 conducted a research that focuses on the effectiveness of ICT training courses within the Jordanian education system. Interviews, questionnaires, direct classroom observations, and field-notes of classroom practices were used for data collection. The findings indicated that ICT training courses usually target two levels of teacher’ ICT skills: ICT skills, and pedagogical use of these skills. Predictably, as the vast majority of teachers from all the three regions reported undertaking the ICDL course, 88 (76.5%) teachers reported developing computer skills (e.g. Word processing, presentation and accessing to information). However, only 58 (50.4%) reported developing pedagogical skills from ICT training.

Al Hatmi (2009) has conducted a study to examine the effectiveness of ICDL training among Omani teachers. findings says that insufficient time in the ICDL training, the focus of the ICDL training on passing the certification test, structural deficiencies in the ICDL instructional methods, change in attitude towards ICT following the ICDL course, and increase in confidence for use of ICT in the classroom. He suggest that while ICDL is effective at teaching basic skills in computer and application use, the training is not effective in training educators on critical assessment of technology or in how to use technology in the classroom.

METHODOLOGY

The study followed Quantitative and Qualitative research techniques including questionnaires, observation and interviews. Quantitative techniques such as percentages, tables and charts were used to analyze data. And qualitative techniques also used for data analysis. Survey design has been the basic research method used in this study. 848 secondary school teachers have qualified in ICDL training in the Badulla district between the period of 2008 and 2013 under EKSP project. From all these 848 Secondary school teachers in the Badulla district, a sample of 85 teachers have been selected representing 10% each Sinhala, Tamil and English medium teachers. Out of 465 Sinhala medium teachers 45 teachers have been selected randomly, out of 241 Tamil medium teachers 25 teachers have
been selected randomly and 15 English medium teachers have been selected randomly out of 142 English medium teachers. The total sample has consisted of 85 secondary school teachers who followed ICDL training under EKSP project so that it would be large enough to ensure the stability of results and small enough for the study to be completed within the given period of time.

RESULTS AND DISCUSSION

ICT Skills of Teachers before Following ICDL Training - In the sample 44% of the teachers had undergone computer training before ICDL. This indicates that a majority of ICDL participants had not undergone any ICT related course before following ICDL. Therefore 56% of teachers who participated in the ICDL training had no any prior knowledge of computer and they were new participants in a computer technology course. 59% of participants already had Power Point Presentation skills before starting ICDL training and also 53% of the participants had Internet skills before starting ICDL. With regard to Word-processing skills only 47% of the teachers stated that they had this skill before staring ICDL training. On the other hand, with respect to Database and Spreadsheets, only 44% of the teachers stated that they had these skills before starting ICDL training. This indicates that a majority of the participants had Presentation (ppt) and Internet skills before starting ICDL training and with regard to Database, Spreadsheets, Word processing and other computer skills only a minority of the participants had these skills before starting ICDL training.

Outcome of ICDL Training On Teachers’ Use of Software Applications - Only 51% of the ICDL participants stated that ICDL training resulted in their use of new software applications in the classroom while 49% of the participants responded that ICDL training did not result in their use of new software applications in the classroom. At the interview, 55% of teachers mentioned that power point presentation was the element of ICDL training that they would most likely to transfer in to class room because of its applicability. 56% of teachers stated that they applied ICT in their teaching because it was a useful resource that impacts on some areas of the curriculum improving student skills in the use of ICT. On the other hand only 15% of the teachers stated that they applied ICT in their teaching as it has an extensive impact on what students learned and how they learned and 12% of teachers stated that it had little impact on student learning (11.76%). However, only 16% of the teachers stated that applying ICT was not applicable to their role. This indicates that a majority of the participants tended to apply ICT in their teaching because it is a useful resource impacting on some areas of the curriculum improving student skills in the use of ICT.

At the interview 65% of participants mentioned that their expectation was passing the ICDL certification exam and they felt that the short period of time giving to learn ICDL was not sufficient so they mentioned they obtained some skills only to pass the examinations within a short period of time.

In the instance of one teacher whose researcher observed it was evident that the teacher was extremely well prepared from the way he delivered the lesson with confidence and the trouble he had taken to make the lesson attractive but his presentation of diagrams and pictures to support the lesson appeared to draw the attention of the students away from his oral delivery.

When asked at the interview about the change in their confidence in using ICT in the class after ICDL training, almost all the participants reported that they had passed the computer tests and were certificated. They mentioned that they had more confidence at Word, Excel, Power Point and Information Communication. These findings in accordance with the findings of Al Hatmi 2009 ICDL training increase in confidence for use of ICT in the classroom.

As one interviewee put: “I was afraid even to a operate computer, but after following ICDL I am confident to use computer technology and I have taught several sessions using computer technology especially Power Point Presentation in a proper way with confidence”

Another interviewee put: “Of course, I learned a lot from the ICDL training and now I can use technology confidently for teaching purposes. Before the ICDL training I only knew to use the MS word, now I know excel, and power point and many other things and I can plan a lesson properly”
As another teacher put: “Before following ICDL training I couldn’t even type a letter using Microsoft word document, but after the training I am able to use Microsoft word document with confidence to do my all my written documents in computer especially I prepare task sheets and annexures attractively to distribute among students in the teaching process”

As one old teacher put: “As most young gents teachers were using Internet through computer and mobile phones to search several things/matters related to education I hadn’t the confidence to use this internet before ICDL training but after training I too started to use Internet without any fear and I am updating my subject knowledge using internet”

It is interesting to note that a small number of teachers considered they were competent but not confident in using computers to teach. This lack of confidence relates to knowing how to integrate ICT into their teaching and understanding the roles of teachers. As one teacher put it:

“I just pretend that I am confident enough to use computers in front of students, but actually, no, I don’t think I can use computers in a proper way and also sometimes I make mistakes. I am more worried that students think I am wasting time and if this happens a lot, they will think I am not a qualified teacher”

When asked at an interview about their changed attitudes towards the use of technology after ICDL training, almost all participants mentioned that using computer technology enhances the students’ performances and teachers were willing to adopt new technology if they gained support at different levels, for example, technical support, support from school leaders, and encouragement from peers.

As one teacher put it: “I was always positive about computers. I may say that the training helped me much to handle these machines perfectly. So I appreciate the ICDL training course offered by the ministry”

Some interviewees did not appreciate the ICDL training offered by the ministry. They expressed that it was not enough to learn about computers competitively.

**Factors Affect Use of Computer Technology after ICDL Training** - 54% of teachers had stated that their use of ICT in teaching and learning has adversely affected a lot by the insufficient number of computers and also 64% teachers have stated that their use of ICT in teaching and learning has adversely affected a lot by the insufficient number of internet-connected computers. 61% of teachers have stated that the insufficient Internet bandwidth or speed adversely affect a lot of their use of ICT in the teaching learning process. When considering the interactive whiteboards, 71% of the teachers have stated that their use of ICT in teaching and learning has been adversely affected a lot by the insufficient number of interactive whiteboards. On the hand while a very high number of the teachers (79%) stated that the insufficient number of laptops/notebooks affected their teaching and learning a lot and 56% of the teachers had stated that the School computers were out of date and needed repairing. This indicates that a majority of the teachers’ use of ICT in teaching and learning had been adversely affected a lot by the insufficient number of computers, insufficient number of internet-connected computers, insufficient Internet speed, insufficient number of interactive whiteboards, insufficient number of laptops/notebooks and damaged computers. While 76% of teachers had stated that their use of ICT in teaching and learning had not been affected at all by their ICT knowledge. This indicates that it has not affected a lot the ICT skills among a majority of the teachers who had followed ICDL training to use ICT in the teaching learning process. However, the findings show that computer knowledge and skills have not affected them at all in the use of ICT in the teaching learning process among the teachers who had undergone ICDL training.

When the researcher visited ICDL trained teachers in the sample teaching rural school and estate schools there was problem of having access to computers since the computer in these schools were predominantly meant for administrative functions. As such it was oblivious that the computer was not available in the teachers day to day teaching learning activities. In the case of schools where computer learning centers (CLC) attached it was noticed that all the computer assigned to the schools were
concentrated in the CLC premises where it became necessary for students to be shifted to the CLC's whenever lesson involving computer had been taught.

CONCLUSION AND RECOMMENDATION

Finding revealed that a high number of ICDL participants were competent in basic skills related to ICDL software applications while only a minority of the participants competent in advanced skills. However, the findings revealed that those who had prior knowledge in certain area in ICT skills with regard to different software applications were more competent after ICDL training in those skills. Obstacles teachers face when using computer technology in the teaching learning process can be summarized as follows. A majority of teachers’ using of ICT in teaching and learning were adversely affected a lot by the insufficient number of computers, insufficient internet-connected computers, poor Internet speed, insufficient whiteboards and laptops, damaged computers, lack of electricity facilities, difficult to cover the workload in the syllabus, high costs of equipment, preparing students for exams and schools time organizations, and dislike of students to use ICT in teaching process and poor support given by the school authorities. However most of teachers who do not use computers have given first preferences to the difficulties in the covering the syllabus and inadequacy of computer facilities. This indicates a lack of knowledge for planning lessons using new technology; teachers may not have experience to prepare lessons using management of time.

However, the findings show that computer knowledge and skills did not affect at all the use of ICT in the teaching learning process among the teachers who had followed ICDL training. This finding supports previous research of Ismail et al., (2010) that the least important barrier noted by teachers was deficiency of knowledge and skills in technology integration”.

It was recommended the duration for ICDL training needs to be extended. Additional vendor-specific training might be required for all teachers after obtaining ICDL certification. These findings, conclusions and recommendations would be useful to the authorities to improve ICDL training.

REFERENCES


