In Search of Pre-Service EFL Certificate Teachers’ Attitudes towards Technology

Gülru Yüksel\textsuperscript{a}\textsuperscript{*}, Suzan Kavanoz\textsuperscript{b}

Faculty of Education, Yıldız Technical University, Istanbul – 34220, TURKEY

Abstract

The increasing importance of computers in today's world forces teachers and educators to become technology-proficient teachers, and to make use of technology in the classroom practices. All over the world most countries acknowledging the need for technologically proficient teachers, have started to infuse some degree of technological competency into pre-service teacher training programmes. Turkey was not an exception. The Turkish Ministry of National Education (MoNE) has started to promote computer use within schools, through policy, and through the provision of computers and professional development (Akkoyunlu, 2002; Rosaen, Hobson, & Khan, 2003; Cohen & Tally, 2004). The Council of Higher Education (HEC) has responded to these initiatives by integrating technology into teacher education programmes. However, like in many other countries several problems have been encountered in the implementation of technology (Salaberry, 2001; Asan, 2003; Çakroglu & Cakroglu, 2003; Özden, 2007). Among several other problems prospective teachers’ attitudes towards technology is the most important one (Gunter, 2001; Johnson & Howell, 2005). Given the significance this study investigated the attitudes of pre-service TEFL teachers toward technology. A twelve item 5-point Likert scale questionnaire was used to collect data from a sample of 200 TEFL Certificate programme students in a state university in Istanbul. Additionally, the study investigated the relationship between attitudes and two independent variables: academic background and gender. The study will contribute to the knowledge regarding the importance of pre-service EFL teachers’ attitudes towards the use of technology for the purpose of teaching a foreign language.

© 2010 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of the Guest Editor.

Keywords: pre-service EFL teachers, attitudes, technology use, gender, certificate program

1. Introduction

Especially the last three decades have witnessed a worldwide expansion of information and communication technologies into many aspects of social life. As more tasks involve computer usage, computer skills and knowledge have become important for occupational and personal success. This initiated a need to prepare future generations for the information age and to change the outdated educational systems. Governments in most part of the world have responded to the challenge by taking several steps. As a first step, in many countries educational reforms have been implemented and computers were introduced into schools (Young, 1991). With the introduction of computers into schools currently practicing teachers and educators were forced to become technology-proficient teachers, and to make use of technology in the classroom practices.

All over the world most countries acknowledging the need for technologically proficient teachers, have quickly

\textsuperscript{*} Corresponding author: Gülru Yüksel Tel.: +90-212-383-4861 fax: +90-212-383-4808.

E-mail address: hayuksel@yildiz.edu.tr

1877-0509 © 2010 Published by Elsevier Ltd.
taken a second step and started to infuse some degree of technological competency into pre-service teacher training programmes (Rosaen, Hobson, & Khan, 2003). Turkey was not an exception. Recognizing the challenge of the “information age” the Turkish Ministry of National Education (MoNE) has initiated certain reforms in education in 1980s’ and started to promote computer use within schools, through policy, and through the provision of computers and professional development (Akkoyunlu, 2002). Within the years 1984-1990, priority was given to hardware purchasing and educational software production for various courses. Meanwhile, in-service in-service training programs were provided to develop teachers' skills in using computer and computer assisted teaching methods (Akkoyunlu & Orhan, 2001). In 1992, in order to integrate IT into schools by using computers at every level of schooling, training the teachers and improving CBE the General Directorate of Computer Education and Services (BILGEM) was established. With the extension of compulsory education from five to six years in 1995-1996 school year, MoNE made the decision to establish computer labs in at least two primary schools in every city and town. Up to now, almost 3000 computer labs for 25 000 computers have been established in 2481 schools (Çakiroğlu & Çakiroğlu, 2002).

The natural result of the above mentioned developments in Turkey was the increased demand of teachers who can make use of these new tools and integrate technology into their classroom. The Council of Higher Education (HEC) has responded to these initiatives by restructuring the education faculties, changing their curricula and integrating technology into teacher education programmes. In 1997-1998 academic year, the new teacher education program was put into practice (Deniz & Sahin, 2006). However, with this reform, the existing pedagogical teacher education program for the students of Faculty of Science and Letters was abolished but this move has caused the gap between teacher supply and demand to increase sharply in all branches. In the field of English as a foreign language the need for teachers was estimated to be 30,000 by the year 2005 (Özyar, 2003). This under-supply of teachers has led the MoNE to resort to find some alternative paths in training sufficient numbers of teachers in many subject areas including English as a foreign language (Seferoglu, 2004).

One of the alternatives to compensate for the shortage of language teachers was launching TEFL Certificate Programs. In accordance with decision number 119 and dated as 12.07.2004, graduates of Language Departments such as English Language and Literature, American Culture and Literature, Spontaneous Translation Department and English Linguistics Department earned the right to be appointed as language teachers (MoNE, http://www.meb.gov.tr/bilgiedinme/SSS.html). Similar to undergraduate English language teaching programmes, a course in instructional technologies was added to TEFL Certificate programmes. The main aim of the course is to provide prospective teachers with new technological tools and experiences that will be useful for the regular activities in their future job.

Unfortunately, despite all these actions, as is the case in many other countries, several problems such as investment and staff development problems, have been encountered in the implementation of technology (Salaberry, 2001; Asan, 2003; Özden, 2007). Among several others, prospective teachers’ attitude toward technology is the most important problem that was commonly reported (Gunter, 2001; Johnson & Howell, 2005). Teachers were not provided any supplementary measures either to use the new tools or to develop positive attitudes toward them (Albirini, 2006). Since teachers are the keys to effective implementation of the use of computers in the educational system, it is crucial to understand their attitudes toward computer use. Given the significance, this study investigated the attitudes of pre-service TEFL teachers toward technology.

1.1. Research in the field

As a recent educational reform, the computerization of education is a complex process where many factors play a role. The success of this initiative depends largely upon administrative and technical support and the attitudes of teachers involved. Larner and Timberlake (1995) hypothesized that variables affecting use and hints to increase use of computers in education are level of anxiety, technical and administrative support, the setup of the technology at the school and personal and professional attitudes. Hızal (1989) claimed that the process of planning for technology use should consider the teacher’s beliefs and knowledge about technology. Bullock (2004) found that teacher attitudes are a major enabling factor in the adoption of technology. It is because attitude affects the decisions a teacher makes about strategies, procedures and materials for instruction. Previous research indicated that for the effective implementation of computers in the classroom, positive attitude is an important factor (Huang & Liaw, 2005) and that teachers’ attitude is a major predictor of the use of new technologies (Vannatta & Fordman, 2004),
2003). Regarding attitude toward computer use in education, researchers distinguish different dimensions such as computer confidence (Rovai & Childress, 2002), gender (Sadik, 2006), confidence and liking (Yıldırım, 2000).

In order to ensure that the teachers are able to use and integrate technology into the curriculum, the basis should be laid at the pre-service teacher’s level. Many scholars and educators assume that pre-service teachers enrolled in undergraduate programs after the year 2000 would be quite familiar with technology, and hence will be more willing to integrate computers into their future classroom practices. Although the early 21st century pre-service teachers are more comfortable with technological devices in general, with computers in particular, they may not be necessarily more willing to incorporate them into their instructional strategies (Russell, Bebell, O’Dwyer, & O’Connor, 2003).

1.2. Purpose of the study

On the part of teacher educators, there is a need to understand the dimensions that influence pre-service teachers' attitudes towards computers. The aim of this study is to examine the profile of a sample of pre-service TEFL Certificate teachers in Turkey. Specifically, the following questions will be answered:

1. What is the overall profile of pre-service teachers' attitudes towards technology?
2. Does technology attitude differ by gender, university type and subject domain?

2. Method

2.1. Subjects

The participants in this research were 200 pre-service teachers enrolled in TEFL Certificate program run by Lifelong Learning Center in Yıldız Technical University, Turkey. Of these, 121 were graduates of a private and 79 were the graduates of a state university. As for the subject domain 129 were graduates in languages 61 were graduates in other disciplines. There were 173 females (86.5%) and 27 males (13.5%) with a mean age 24.2 years (SD=3.74). The sample was homogeneous - all of the participants were non-native speakers of English. Moreover, all had similar educational experiences; all participants had at least three years of university education instructed in second language (a prerequisite for joining these programs).

2.2. Instrument

The instrument included sections on participants’ demographic background, gender, subject domain and university type, and the Attitudes to Technology (AT) questionnaire. The instrument is a twelve item 5-point Likert scale questionnaire that consists of two components of computer attitudes. The first component, 'Affect', is composed of seven items and measures feelings towards technology. The second component, 'Confidence' is composed of five items that measure the individual's confidence in using technology.

Participants responded to the questionnaire using a five-point scale of totally disagree (1), disagree (2), no strong opinion (3), agree (4), and strongly agree (5). The scores from the items on each component were aggregated to provide individual scores on each component. In this study, the negative items were reversed coded in order that meaningful analyses at the sub-scale level could be conducted. The Cronbach alpha coefficients for the instrument was found to be .89 which indicated a high reliability.

2.3. Data analysis

Data was collected using a questionnaire. SPSS 15.0 was used to analyze and interpret the collected data. Data was analyzed using independent t-test.
3. Results

3.1. Research question 1: Pre-service teachers’ attitudes toward technology

Attitudes of TEFL certificate teachers were measured in terms of affect and confidence. All the participants responded to all items and no missing data was found in the survey. Table 1 displays the participants’ mean scores with the standard deviations.

Table 1. Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect</td>
<td>3.14</td>
<td>5.00</td>
<td>4.31</td>
<td>.45</td>
</tr>
<tr>
<td>Confidence</td>
<td>1.80</td>
<td>5.00</td>
<td>3.74</td>
<td>.63</td>
</tr>
<tr>
<td>Overall attitude</td>
<td>2.83</td>
<td>4.92</td>
<td>4.07</td>
<td>.46</td>
</tr>
</tbody>
</table>

As Table 1 illustrates, teachers’ overall attitudes toward technology were positive with an overall mean score of 4.07 (SD = 0.46). The respondents’ positive attitudes were evident within the affect (mean = 4.31) domain. Of the 200 respondents 66.5% had highly positive, 30.5% had slightly positive attitudes toward technology. Within the affect domain, the mean score of 4.31 (SD = 0.45) showed that the participants had a very positive attitude to technology and were keen to learn more. In this domain none of the respondents marked disagreement. However, as for the confidence domain, the mean score is lower (3.74). The percentage of respondents who expressed disagreement was higher than that of the affect domain (11.5%). This finding indicated that although they mostly had a positive attitude toward technology and keen to learn more, they do not feel confident enough to use technology to its full potential. At the global level, the overall attitude is well above the mid-point of the scale (3.00) and this indicated that participants held a positive attitude towards the computer.

3.2. Research question 2: Attitude and independent variables

To answer the second research question the total attitude scores were analyzed with respect to three independent variables; gender, university type and subject domain. The results of the statistical analysis were given in Table 2. Except from the gender, no statistically significant differences were found between the independent variables and the attitude scores. T-test results showed that males’ attitude scores are significantly higher than that of the females (p<.05).

Table 2. Attitude scores according to gender, university type and subject domain

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4.30</td>
<td>.24</td>
<td>.006*</td>
</tr>
<tr>
<td>Female</td>
<td>4.04</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>University type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>4.11</td>
<td>.50</td>
<td>.307</td>
</tr>
<tr>
<td>Private</td>
<td>4.05</td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td>Subject domain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>4.09</td>
<td>.46</td>
<td>.422</td>
</tr>
<tr>
<td>Other</td>
<td>4.04</td>
<td>.48</td>
<td></td>
</tr>
</tbody>
</table>

4. Conclusion

Since teachers are the key agents in schools and since attitudes toward technology affect how teachers respond to technology, it is important for them to have positive attitude toward technology. The findings of previous research indicated a close relationship between attitude and usage and intention to use. Because of this close link, in order to make future predictions on the implementation of technology into second language classroom practices it is crucial
to examine the attitudes of pre-service teachers. This study investigated the attitudes of pre-service teachers toward technology and the relationship of participants’ attitudes to a selected set of independent variables. Overall, the participants showed positive attitudes towards technology, as shown by the mean scores for the two subscales being 3.5 and above (on a 5-point scale). The overall positive level of attitudes could be attributed to the availability and accessibility to technological tools such as computers given to the pre-service teachers at various stages of their education. With respect to independent variables, we found significant differences in attitudes by gender. This finding is in line with the previous research (e.g. Sadik, 2006). Female subjects tended to have more negative attitudes towards technology. However, unlike previous studies we could not find any differences between university type and subject domain, and the attitudes.

This study aims to determine the attitudes of pre-service TEFL certificate teachers and to provide a glimpse of selected variables that affect the technology attitudes. Further studies are necessary for a systematic examination of all aspects of teacher education and how these interact to impact on pre-service teachers’ attitudes and usage of the computer as a tool for instructional purposes and professional development.

References

(2005), 21(5), 729-743.


