A Study of Computer Anxiety

Rik Beatty

Introduction

The world at large is going through a transition, and the field of education is no different. The transition centers on the integration of technology into more and more aspects of our daily lives. In education this transition means more technology in the classroom, and a bigger role for it to play in learning. Teaching will be affected, and, will need to adapt in this critical time. Teachers will be asked to find new ways of imparting the required knowledge to their students. As we all know, change is sometimes hard and could be accompanied by anxiety.

One of these anxieties could very well be that of computer anxiety. These feelings in teachers could have an effect on the integration of new technologies in the classroom. Similar studies have been done evolving educators in higher education (Georgina & Hosford, 2009), but few, if any, in the K-12 area. The purpose of the study being proposed here is to see if there could be a relationship between computer anxiety and the technological integration by teachers in the K-12 classroom.

Literature Review

“Technology Integration,” as put forth by Belland (2009), is basically a change in culture caused by the adoption of technology. This change in the culture of the classroom will definitely
come up against the presently held beliefs of the teachers involved (Tondeur, Hermans, van Braak, & Valcke, 2008) and could affect successful integration (Smarkola, 2008). In the article by Georgina & Hosford (2009), the findings indicated that higher education teachers’ feelings of competency in their use of computers did affect the amount of integration in the classroom. It sounds reasonable to think that these findings might extend to the K-12 level as well.

One possible thing that could be at play in this situation could be the presence of computer anxiety whether it is in general or as a result of direct contact (Dyck, Gee, & Smither, 1998). The anxiety also could be one of those presently held ideas teachers have that could be affecting their willingness to help in the efficient integration of technology in the classroom.

If these two things are combined in thinking about the potential problems that might come up during the integration of technology in the classroom, it is possible to come to the conclusion that there might be a relationship between the feelings and anxieties of teachers and the successful technological integration. Herein lays the hypothetical foundation that underpins the stated question of this proposed study.

**Planned Methodology**

**Research Design:**

The design being proposed in this study would be similar to, and modeled after, that used in the study conducted by Georina & Hosford (2009), in that it would be a non-experimental quantitative study utilizing an original survey to be distributed online. As in the previous study, there will be no control over the independent variable.
Sample and Population Defined:

The population to be sampled in this study would consist of K-12 teachers. The hope for this study would be to be able to send the invitation to all K-12 teachers in the State of Arkansas. This would allow for the possibility that the study include teachers from a diverse geographic and socioeconomic range area. This would also help in the randomization of the respondents. The sample would then become the group of those teachers that responded to the invitation and completed the survey.

Procedures and Data Collection:

The way that data will be collected in this study is by online survey. The all respondents will be notified by email at the same time by bulk email, and will be asked to participate within a given time frame. Prior to administering the final draft of the survey, it will be given a pilot run within a single, small district to check the effectiveness of the administration, and content of the survey. If any changes to either aspect are needed, they will be made before the true administration of the study.

After the administration of the final draft of the survey under study conditions, the data will be grouped into the proper categories, and then statistically analyzed to see if there are any significant relationships. If there are any failures in this study, the whole process will be re-evaluated, and if possible reattempted.
Instrumentation:

As stated earlier the data collection instrument in this study will be an original survey created specifically for this study. It should include in the first section items pertaining to demographic data such as age, years teaching, grade(s) taught, do you use a computer at home, do you use a computer at work, and do you use a computer in your teaching. In the second section it should include items pertaining to how computers are integrated into the teacher’s pedagogy, items pertaining to computer use competency levels, and computer anxiety levels.

The survey will be administered on a special website via the internet. Since the things being studied are related to technology anxiety, the rate of non-response could be a source of data on response rates because those that do not respond might be highly anxious, overburdened, or apathetic. This data could be a resource and of use for future studies, and will be documented as well.

Data Analysis:

The data analysis in this study will be similar to the study conducted by Georina & Hosford (2009) in that it will be strictly statistical. Upon completion of the survey it will be decided which of the statistical tests will be most applicable (i.e. ANOVA, t test, or both).

Limitation:

The main limitation to this study is the fact that it relies on the voluntary participation of the respondents. This could be a problem if only a small group of people actually participate. Since this study is quantitative in nature, the data collected should be of some use no matter
the number of respondents. It might not shed any light on the actual question at issue; however it may shed some light on the modeling of future studies that choose to run in this manner.

Potential Uses:

The potential use of this study and its findings are many. First, the finding regarding anxiety could be useful in the creation of future teacher training programs. The findings could also be useful in interpreting the feedback school administrators get from the teachers. Finally, the data could be extremely helpful in deciding what sort of technological systems administrators and teachers decide to integrate into the classroom.

References


