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Budgeted Money in Staff Development and Technology Integration

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BUDGETED MONEY IN STAFF DEVELOPMENT
AND TECHNOLOGY INTEGRATION

by

Chad Frerichs

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Master of Arts
Department of Educational Studies

Western Michigan University
Kalamazoo, Michigan
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Many studies have been done on the different styles of professional staff development for teachers and administrators in the area of technology and its integration into the classroom. One element has been consistently ignored in recent studies, the amount of money being spent on staff development.

This research attempted to uncover the relationship between expenditures on staff development activities for educational technology and the extent of technology integration occurring in K-12 schools. With shrinking budgets throughout the education system in this country, an answer is needed. As Butler says in her review of the research, “Further studies of this type are needed to support what is generally believed to be true: staff development can and does have impact on student performance.” (2001)
ACKNOWLEDGMENTS

I would like to thank Dr. Tracy DuBay for her help and support throughout my studies in pursuit of this degree. I would also like to thank Dr. Martha Peet from the Texas Center for Educational Technology at the University of North Texas for her fantastic effort in setting up and maintaining the online survey instrument.

I would also like to thank my wife and new daughter for the great patience they have shown during this endeavor.

Chad Frerichs
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CHAPTER I

NATURE AND SIGNIFICANCE OF THE PROBLEM

Introduction

The following text details a study that looks at how the amount of money spent on technology related staff development impacts the amount of technology that is integrated into the curriculum. The study contends that while other factors may indeed affect that amount of integration, the amount spent on training teachers both how to use technology themselves and how to use it in their classrooms is the paramount factor.

Purpose of the Study

The purpose of this study was to examine the impact of educational technology staff development funding on the actual level of technology integration in the K-12 classroom setting. School budgets seem to be ever shrinking. With those cuts, also come more expectations. Money does not come easily to most school districts and knowing how to spend the money that does come in appropriately is a huge concern. This study attempts to lend guidance to schools when trying to decide how to spend their limited technology dollars.
Hypothesis

This study addressed the following research hypothesis:

Schools that spend more money on staff development in the area of technology will have higher rates of technology integration in their curriculum than those schools that spend less money on educational technology staff development.

Variables of the Study

The amount of money spent on technology-related staff development is the independent variable in this study. The dependent variable of this research is the level of technology integration as measured by an instrument from Insight. Other variables such as age and gender of the teacher, socioeconomic status of the school district, school and class size, and access to computer support and equipment were also to be considered.

Limitations of the Study

Studies such as this one are absolutely dependent on the amount of people that are willing to participate and fill out the survey. When those numbers are low it
becomes difficult to draw any conclusions that are any more than suggestions for further study. The number of respondents to this study’s survey instrument was low and therefore any conclusions drawn by the researcher need to be considered with that in mind.

Organization of Remaining Chapters

The remaining chapters of this book will outline all activities and results pertaining to this research study. Specifically, the second chapter presents an in-depth review of the literature relative to this research study. Chapter three looks at the methods of research this study followed including the sampling method, how data was collected a description of the instrument used, and how that data was to be analyzed. The last chapter describes the data collected in a detailed analysis, the conclusions drawn by the researcher, and the limitations of this study and the need for further study.
CHAPTER II

REVIEW OF RELATED LITERATURE

Literature Review

Literature investigating the amount of technology integration in the classroom is abundant. Below is a review of what some of those studies suggest may be factors contributing to the amount of integration. Several studies suggest that the amount of training may have an affect on the amount of integration, but also say that this relationship has not been adequately examined. More studies have looked at other contributing factors such as age of the teacher, access to technical support, and the type of staff development.

The U.S. Congress Office of Technology Assessment (1995) suggest 30% of a school’s technology budget be spent on staff development. Based on that assessment Christensen (2002, Research Rationale section) writes, "...current spending is inadequate." Another study goes further to say that money for technical support should be a separate budget item all together. (Barnett& Harvey, 2001)

Some studies indicate that the amount of money spent on technology staff development determines the amount of integration (levels of integration are measured by
several different instruments in the studies reviewed; This study uses a combination of two of these, Insights's "Technology Use Questionnaire" and ISTE's "STaR Chart") that takes place. (Vincent & Kaberon, 2000; Christensen, 2002; Swain & Pearson, 2002) While Williams and Kingham (2003, Conclusions section) tell us, "Staff development must take priority if the financial investment in technology is ever to pay off." Dawson and Rakes (2003) agree with them and add that principals are a key component to technology integration and should also be trained in its use and integration. In Butler's (2001) literature review she says that there is an indication "that staff development programs can have positive effect on student performance." However, there has been little "careful" research done to support this statement. Butler is also of the same opinion that staff development is a strong contributor to technology integration.

Dawson and Rakes (2003) also discuss that because of the lack of support and training, technology is not being "... fully integrated into the fabric of teaching and learning." Other factors affecting the level of integration have also been identified including: teacher confidence, levels of classroom connectivity, computer expertise, constructivist pedagogy, high frequency of informal contacts with other teachers, involvement in professional leadership activities, teacher age, and
subject being taught. (Christensen, 2002; Becker, 1999; Malqueen, 2001)

Atkins and Vasu (2000, Number of Hours of Technology Training Section) agree with some of these factors, such as lack of support and adequate access to technology, but disagree in the area of staff development. They report, "Attending many hours of technology training does not completely ensure acquisition of computer knowledge or use of technology in the classroom." Swan et al (2002), citing several other sources, agree when they write that traditional technology-based staff development has been shown to have little or no effect on the amount of technology integrated into the curriculum.

Elementary administrators seem to agree as well when in a study by Johnson, Livingston, Schwartz, and Slater (2000) they ranked staff development as sixth out of thirteen domains used to describe effective schools. However, Williams and Kingham (2003) suggest that access does not equal integration, but proper training and follow-up support would better serve teachers in the use of technology. Jenson, Lewis and Savage (2002) also suggest that alternative methods of staff support are needed to achieve the "elusive goal" of technology integration.

Many researchers are of the common opinion that schools must create comprehensive technology plans and
that staff development should be directly linked to that plan. They also say that new models of staff development are needed that better link to those technology plans. (Barnett & Harvey, 2001; Hunter, 2001; Swan et al, 2002, Sherry, 1997) Sherry (1997) talks of alternative methods including better training for pre-service teachers, while Hunter (2001) says that simply using the "brainpower" of teachers, parents, and even students can lead to real integration of technology into the curriculum. Atkins and Vasu (2000) add that having technology specialists may add to technology integration. Adding time for peer communication and sharing of ideas, summer workshops, and online tutorials have also been cited as improving teacher use of technology. (Malqueen, 2001)

The research differs in its ideas about the amount of staff development and its effects on technology integration. Many of the studies say that proper staff development does increase integration, but new models and methods are needed. Other variables are also shown to greatly affect the level of technology integration into the curriculum. This research attempted to offer valuable information about the effects that technology related staff development has on technology integration in the classroom.
Theoretical Framework

The theoretical basis for this study is outlined in a study done by Atkins and Vasu (2000) entitled "Measuring Knowledge of Technology Usage and Stages of Concern about Computing: A Study of Middle School Teachers." In this study the authors suggest that attending more staff development does not necessarily ensure that teachers will use technology in their classrooms. They go on to say that many other factors contribute to the integration, or lack thereof, of technology into the curriculum. These factors are identified as including but not limited to "technical support, administrative support, adequate budget, and adequate access to hardware and software" (p. 279).

Research Question

Hypothesis: Schools that spend more money on staff development in the area of technology will have higher rates of technology integration in their curriculums than those schools that spend less.

Null Hypothesis: Schools that spend more money on staff development in the area of technology will have equal or lesser rates of technology integration in their curriculums than those schools that spend less.
CHAPTER III

METHOD

Sampling

The sampling frame included each school district in Iowa where the superintendent has an email address. The sample included administrators and teachers from those districts whom agreed to participate in the study in order to get as complete a data set as possible.

Data Collection

An Internet survey instrument was used to collect the data. The survey was hosted on a secure site and results have been stored in a secure database. Participants had access to the anonymous survey for a three-month period after which time the web site was taken offline. A hard copy of the anonymous results of the survey is kept in Dr. Tracy DuBay's office at Western Michigan University. A secure digital copy is kept on the servers at South-Central RTEC Instrument Library and Data Repository at the University of North Texas in Denton, Texas.

Superintendents from every school in Iowa whom had a listed email address were emailed a request to participate in the study. An additional email was sent to
those who did not respond after the initial email. In each of these emails a link to the superintendents' survey and the teachers' survey was included. Superintendents were asked to forward the email to a representative sample (at least one teacher per grade level, per building) of teachers at each grade level asking them to complete the teachers' survey.

Description of Instrument

The instrument was based on the Technology Use Questionnaire (Insights 2003). Items regarding school data and demographics were added to the beginning of the survey. The instrument consisted of 51 questions organized into two main sections, Demographics and Questionnaire. The Demographics section was broken into four subsections. All questions in the Demographics section required specific responses. Superintendents were asked to pass on information regarding such things as: school size, percentage of students on free and reduced lunches, exact amounts of funds allocated for technology training, etc. to the teachers. Teachers were asked for information on such things as: level(s) taught, class size, number of times per week technology is used in their classrooms, etc. Items in the Questionnaire section were answered using a scale from "Strongly Agree" to
"Strongly Disagree," and dealt with technology related matters. A copy of the instrument is located in the Appendix.

Data Analysis Procedures

The responding schools were to be grouped into subgroups based on the number of students in the district and then by the amount spent on staff development. The level of technology integration was then to be measured against the amount of money spent on staff development as well as several other variables including: mean age of teachers, grade level, average class size, access to technology, etc. Due to the low number of respondents and the fact that none of the schools had a budget for technology related staff development, this procedure was not followed. Instead all those responding were put into one group and a broad analysis of each question area was done.
CHAPTER IV

RESULTS

Analysis

The respondents participating in this study were from schools ranging in size from 309 students to 2029.2 students with an average class size of 18. All schools responding were from similar socio-economic status based on the percentage of students receiving free or reduced lunches which ranged from 26% to 28.71%.

Fifty percent of those responding to the survey were elementary teachers, grades K-6, 36% were junior high and high school teachers, grades 6-12, and the remainder were district level personnel. The average age of those answering the survey was 45.72.

One hundred percent of the people responding had access to computers in their rooms at school. Furthermore, all those submitting the survey had technical support personnel available to them, with most (nearly 82%) receiving assistance in less than 8 hours. Only 27% of the schools did not have some sort of technology coach available to assist and train teachers and other personnel in technology related areas.

The participants reported that their schools spent zero or less than 1% of the schools' budgets on
technology related staff development. The only money spent on technology and technology related staff development was from other sources, i.e. grants, state initiatives, etc. Despite this lack of district provided staff development, respondents reported spending well over 100 hours of their own time last year using and learning technology. When asked if they needed further training to assist in the integration of technology into their classrooms, half of the teachers were unsure. However, not one indicated it was easy for him or her to design student-centered, integrated curriculum units that use the classroom computers. The majority agreed or strongly agreed that computers were an important part of classroom instruction, and they are motivated to find ways to use computers in the classroom.

The following table depicts the results of the survey items pertaining to the teachers' use of technology.
Table 1: Teacher Use

<table>
<thead>
<tr>
<th>Teacher Use</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I alter my instructional use of the classroom computer(s) as I gain new knowledge of software applications and research on teaching and learning.</td>
<td>1 9.09%</td>
<td>4 36.36%</td>
<td>5 45.45%</td>
<td>0 0.00%</td>
<td>1 9.09%</td>
</tr>
<tr>
<td>Using the classroom computer(s) is a priority for me this school year.</td>
<td>1 9.09%</td>
<td>3 27.27%</td>
<td>5 45.45%</td>
<td>2 18.18%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>I have enough time to use the classroom computer(s).</td>
<td>1 9.09%</td>
<td>3 27.27%</td>
<td>2 18.18%</td>
<td>5 45.45%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>I use my classroom computer(s) primarily to track grades and/or answer email.</td>
<td>3 27.27%</td>
<td>0 0.00%</td>
<td>0 0.00%</td>
<td>5 45.45%</td>
<td>2 18.18%</td>
</tr>
<tr>
<td>I rely on others (student assistant, parent volunteer, close friend) to do my computer-related tasks for me in my classroom.</td>
<td>0 0.00%</td>
<td>0 0.00%</td>
<td>0 0.00%</td>
<td>5 45.45%</td>
<td>4 36.36%</td>
</tr>
<tr>
<td>I access the Internet quite frequently.</td>
<td>5 45.45%</td>
<td>3 27.27%</td>
<td>0 0.00%</td>
<td>2 18.18%</td>
<td>0 0.00%</td>
</tr>
</tbody>
</table>
I am proficient with basic software applications (word processing, Internet applications, CD ROMs, Games).

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 45.45%</td>
<td>6 54.55%</td>
<td>0 0.00%</td>
<td>0 0.00%</td>
<td>0 0.00%</td>
</tr>
</tbody>
</table>

I am proficient with at least one multimedia authoring tool (such as HyperStudio, PowerPoint, KidPix, or AppleWorks).

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 27.27%</td>
<td>4 36.36%</td>
<td>0 0.00%</td>
<td>2 18.18%</td>
<td>2 18.18%</td>
</tr>
</tbody>
</table>

I am very comfortable using a computer.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 27.27%</td>
<td>6 54.55%</td>
<td>1 9.09%</td>
<td>1 9.09%</td>
<td>0 0.00%</td>
</tr>
</tbody>
</table>

In the "teacher use" section of the survey, 81.81% of those responding said they were comfortable using a computer and all said they were proficient using basic computer software such as word processors and Internet applications. Only 18.18% said that they did not use the Internet quite frequently, and none indicated they had others do their computer related tasks. Only 36.36% said they had time enough to use the computer in the classroom, and it was a priority this year for them to use computers in the classroom. However, only 27.27% said they use their classroom computer(s) primarily for doing grades and answer email.

The following table describes data gathered regarding how teachers use technology in their lesson...
development activities.

Table 2: Lesson Development

<table>
<thead>
<tr>
<th>Lesson Development</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I prefer to use existing curriculum units that integrate the classroom computer(s)</td>
<td>0.00%</td>
<td>6</td>
<td>54.55%</td>
<td>2</td>
<td>18.18%</td>
</tr>
<tr>
<td>with authentic assessment and student relevancy rather than building my own units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from scratch.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use my students' interests, experiences, and desires to solve authentic problems</td>
<td>0.00%</td>
<td>4</td>
<td>36.36%</td>
<td>4</td>
<td>36.36%</td>
</tr>
<tr>
<td>when planning computer-related activities in my classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using available technology and computers, I have expanded the horizons of</td>
<td>0.00%</td>
<td>4</td>
<td>36.36%</td>
<td>4</td>
<td>36.36%</td>
</tr>
<tr>
<td>instructional computing in my classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use integrated curriculum units that place heavy emphasis on complex thinking</td>
<td>0.00%</td>
<td>3</td>
<td>27.27%</td>
<td>3</td>
<td>27.27%</td>
</tr>
<tr>
<td>skills, computer use, and student relevancy to the real world.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I integrate the most current research on teaching and learning when using the</td>
<td>0.00%</td>
<td>4</td>
<td>36.36%</td>
<td>4</td>
<td>36.36%</td>
</tr>
<tr>
<td>classroom computers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table detailed the results of the survey items related to lesson development. 54.55% of those responding said they prefer to use existing units when they integrate computers into their teaching, but only 27.27% said those units placed a heavy emphasis on
complex thinking skills and were relevant to the real world. 36.36% said they use their students' experiences to solve authentic problems and to expand the horizons of instructional computing in their classrooms. That same percentage said they use the most current research on teaching and learning when using the classroom computers.

The table following relates the responses given to statements regarding computer activities related to students.

Table 3: Computer Related Activities

<table>
<thead>
<tr>
<th>Computer Related Activities</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I assign daily or weekly computer-related tasks that support my curriculum (analyzing data</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>from a survey, creating multimedia presentations that showcase students' understanding</td>
<td>18.18%</td>
<td>18.18%</td>
<td>18.18%</td>
<td>27.27%</td>
<td>18.18%</td>
</tr>
<tr>
<td>of important content, researching information via CDs or the Internet).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I provide short-term (daily or weekly) assignments using the classroom computer(s) that</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>emphasize the use of different software applications (such as spreadsheets, databases,</td>
<td>18.18%</td>
<td>9.09%</td>
<td>36.36%</td>
<td>18.18%</td>
<td>18.18%</td>
</tr>
<tr>
<td>Internet use, and multimedia).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find computers to be an important part of classroom instruction.</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>27.27%</td>
<td>45.45%</td>
<td>27.27%</td>
<td>0</td>
<td>0.00%</td>
</tr>
</tbody>
</table>


### Table 3 - continued

I allocate time for students to practice their computer skills on the classroom computer(s).

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.09%</td>
<td>1</td>
<td>9.09%</td>
<td>7</td>
</tr>
<tr>
<td>63.64%</td>
<td></td>
<td>1</td>
<td>9.09%</td>
<td>1</td>
</tr>
<tr>
<td>9.09%</td>
<td></td>
<td>9.09%</td>
<td></td>
<td>9.09%</td>
</tr>
</tbody>
</table>

I need more and/or more current computers in order to use technology with my classroom instruction.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>18.18%</td>
<td>3</td>
<td>27.27%</td>
<td>5</td>
</tr>
<tr>
<td>45.45%</td>
<td></td>
<td>1</td>
<td>9.09%</td>
<td>0</td>
</tr>
<tr>
<td>0.00%</td>
<td></td>
<td>0</td>
<td></td>
<td>0.00%</td>
</tr>
</tbody>
</table>

My students use the Internet for collaboration with others, including joint publishing, communicating, and researching to solve authentic problems.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00%</td>
<td>3</td>
<td>27.27%</td>
<td>2</td>
</tr>
<tr>
<td>18.18%</td>
<td></td>
<td>2</td>
<td>18.18%</td>
<td>3</td>
</tr>
<tr>
<td>27.27%</td>
<td></td>
<td>2</td>
<td>18.18%</td>
<td>2</td>
</tr>
</tbody>
</table>

I seek out activities that promote increased problem-solving and critical thinking using the classroom computer(s).

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.09%</td>
<td>5</td>
<td>45.45%</td>
<td>1</td>
</tr>
<tr>
<td>9.09%</td>
<td></td>
<td>1</td>
<td>9.09%</td>
<td>2</td>
</tr>
<tr>
<td>18.18%</td>
<td></td>
<td>1</td>
<td>9.09%</td>
<td>2</td>
</tr>
</tbody>
</table>

I plan computer-related activities in my classroom that will improve my student's basic skills (e.g., reading, writing, math computation).

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.09%</td>
<td>3</td>
<td>27.27%</td>
<td>2</td>
</tr>
<tr>
<td>18.18%</td>
<td></td>
<td>2</td>
<td>18.18%</td>
<td>3</td>
</tr>
<tr>
<td>27.27%</td>
<td></td>
<td>2</td>
<td>18.18%</td>
<td>2</td>
</tr>
</tbody>
</table>

In my classroom, students use technology-based computer and Internet resources beyond the school (NASA, other government agencies, private sector) to solve authentic problems.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.09%</td>
<td>2</td>
<td>18.18%</td>
<td>2</td>
</tr>
<tr>
<td>18.18%</td>
<td></td>
<td>2</td>
<td>18.18%</td>
<td>3</td>
</tr>
<tr>
<td>27.27%</td>
<td></td>
<td>2</td>
<td>18.18%</td>
<td>3</td>
</tr>
</tbody>
</table>

Using available technology and computers, I have expanded the horizons of instructional computing in my classroom.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00%</td>
<td>4</td>
<td>36.36%</td>
<td>1</td>
</tr>
<tr>
<td>36.36%</td>
<td></td>
<td>1</td>
<td>9.09%</td>
<td>1</td>
</tr>
<tr>
<td>9.09%</td>
<td></td>
<td>1</td>
<td>9.09%</td>
<td>1</td>
</tr>
</tbody>
</table>
Computer related activities involving students can be a great indicator of the amount of technology integration in the classroom. Few of the teachers responding (36.36%) said they had daily or weekly assignments using the classroom computers, and even fewer (27.27%) said they gave short term assignments focusing on computer software applications in the classroom. Fewer still (18.18%) said they allocate time for students to practice their computer skills in the classroom. However 72.72% said that they think computers are an important part of classroom instruction, and 54.54% said they seek out activities that promote increased problem-solving and critical thinking using the classroom computer(s). Only 27.27% of those responding said their students used computer related resources beyond the school. 36.36% agree that they use available technology and computers to expand the horizons of instructional computing in their classrooms, and only 45.45% said they need more current computers to use in order to better implement technology into their lessons.

Survey items dealing with student access to technology are depicted in the table below.
Table 4 - Student Access

Student Access

My students have access to all forms of technology and computers at any time during the instructional day.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>27.27%</td>
<td>4</td>
<td>36.36%</td>
<td>27.27%</td>
</tr>
</tbody>
</table>

One of my technology goals is for students to be able to use the classroom computer as another tool for learning.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>18.18%</td>
<td>4</td>
<td>36.36%</td>
<td>27.27%</td>
</tr>
</tbody>
</table>

My students eagerly pursue the use of the classroom computers.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>27.27%</td>
<td>2</td>
<td>18.18%</td>
<td>45.45%</td>
</tr>
</tbody>
</table>

I have enough time to use the classroom computer(s).

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.09%</td>
<td>3</td>
<td>27.27%</td>
<td>18.18%</td>
</tr>
</tbody>
</table>

I find the use of computers to be practical for my students.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>18.18%</td>
<td>7</td>
<td>63.64%</td>
<td>18.18%</td>
</tr>
</tbody>
</table>

Without adequate access to computers and technology it may prove much harder to integrate computers and technology into the curriculum. When presented with the statement "My students have access to all forms of technology and computers at any time during the
instructional day," 63.63% of the respondents agreed, and 81.81% said it was practical for their students to use that technology. However, just over half (54.54%) said one of their goals for technology was for students to use the classroom computer as another learning tool. 45.45% disagreed that they have enough time to use the computers in their classrooms, and the same number said their students eagerly pursue the use of the computer.

Professional development items from the survey are shown in the table below.

Table 5: Professional Development

<table>
<thead>
<tr>
<th>Professional Development</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I seek professional development that maximizes the use of the computers and technology available to my students.</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>I use the computer for my own continuing education.</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>One of my professional goals is to learn more ways to use computers in seamless instruction (i.e., it is as easy for me as using a chalkboard.)</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
I have the background to show others how to merge technology with integrated, thematic curricula.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00%</td>
<td>3</td>
<td>27.27%</td>
<td>5</td>
</tr>
</tbody>
</table>

I am able to troubleshoot various software problems such as translations, compression of image files, and cross-platform issues.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>18.18%</td>
<td>2</td>
<td>18.18%</td>
<td>2</td>
</tr>
</tbody>
</table>

I actively participate in online collaboration opportunities.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Disagree or Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.09%</td>
<td>3</td>
<td>27.27%</td>
<td>3</td>
</tr>
</tbody>
</table>

Professional development can make using and integrating technology much easier. Less than half of those responding agreed with the statement that they were able to troubleshoot various software problems and even fewer (27.27%) said they have the background to teach others how to merge technology into the curriculum. However, only 18.18% disagreed that they seek professional development that maximizes the use of the computers and technology available to my students, but only 36.36% said it was one of their goals to learn more ways to use computers in seamless instruction.

Conclusion

The most glaring result of this study was that, of
those responding, not one school budgeted any money for technology related staff development outside of money gained from grants and state initiatives. As stated earlier, the U.S. Congress Office of Technology Assessment (1995) suggest 30% of a school's technology budget be spent on staff development. None of these schools even came close to that number.

Therefore, it is not a surprise that so few teachers surveyed said it was a priority to use computers in the classroom. Without adequate training teachers cannot be expected to utilize technology in their classrooms. Nor can they be expected to use the latest research in designing lessons, and many of them indicated that they did not when developing computer related activities for their students.

Since the teachers do not have proper training to develop lessons, they do not assign many lessons with computer elements. This greatly furthers the lack of integration of technology into the curriculum. Although it seems the students have adequate access to computers and technology, it also seems that this technology is being greatly underutilized.

This under utilization could be due to the fact that the teachers do not feel comfortable with the technology themselves. Therefore, they cannot be expected to teach others using this technology, especially students.
Additional staff development may raise the comfort level of staff and thus elevate the level of technology integration.

Is the lack of district provided training holding back the integration of technology into these classrooms? This study was unable to determine the answer to that question, and it is the opinion of this researcher that further study is definitely needed.

Limitations and Need for Further Study

In ethical research involving human subjects, one's research is absolutely dependent upon the willingness of those being studied to participate. In the case of this study the willingness of the subjects (or more so their superiors) was extremely lacking. Therefore, the results of the study are far from adequate to thoroughly investigate this issue and too limited to do any sort of detailed analysis.

Many studies have been done on the different styles of professional staff development for teachers and administrators in the area of technology and its integration into the classroom. Several different teachers' and administrators' characteristics have been identified as possible predictors of how much one might integrate technology into the classroom including: "age,
sex, principal's years of administrative experience, school size, and grade level." (Dawson & Rakes, 2003) One element, however, has been consistently ignored in recent studies (1994 and after), and that is how much money is being spent on staff development. Researchers seem to agree that staff development is crucial to the successful integration of technology. (Swan, Holmes, Vargas, Jennings, Meier, & Rubenfeld, 2002; Williams & Kingham, 2003) Since the beginning of the technology boom in our schools, teacher training and staff development "...has simply not had the same priority as spending on hardware and software." (Becker, 1994, section 7) "In addition, most schools do not budget adequately for technology and technology training." (Swan et al., 2002)

Money is being spent for technology, but inadequate amounts are spent on corresponding staff development. "In recent years, the investment in technology for K-12 public schools in the United States has grown astronomically." (Yau, 1999, Introduction section) Teachers and staff continue to cite one of the biggest reasons for not using these vast resources more is the "lack of proper training and follow-up support" (Williams & Kingham, 2003). Administrators are also lacking in their abilities to use and promote the use of technology in their schools. (Thomas, 1999) If the administrators themselves do not know how to use the
technology it is unlikely the school environment will be conducive to the use of technology overall. However, Dawson and Rakes (2003, Conclusions section) contend that, "As principals become more adept at guiding technology integration, more efficient and effective technology use should become prevalent in schools."

Research found many studies that indicated as principals and teachers become more comfortable with technology, it will become more effectively utilized in the curriculum. Searches using the online library called Questia, Educational Resources Information Center (ERIC), and Google's beta version of their Scholar search engine using the keywords technology, staff development, and budget, produced few studies that even mentioned budgets and technology integration. There were none that I could locate that studied the effect of the amount spent on technology staff development and its effect on technology integration in the classroom.

The correlation might seem obvious at first, but when further thought and research are put towards the subject there are an abundance of factors that may contribute to the integration, or lack thereof, of technology into the classroom. Simply putting more money towards the training of administrators and staff in the area of technology may not be the solution. However, it was the goal of this study, and should be the goal of
future studies, to show that affects of these other factors proved minimal when compared with the money put towards staff development. With shrinking budgets throughout the education system in this country, an answer is needed. As Butler says in her review of the research, "Further studies of this type are needed to support what is generally believed to be true: staff development can and does have impact on student performance." (2001)
BIBLIOGRAPHY


APPENDIX A
HSIRB APPROVAL LETTER
Date: October 18, 2005

To: Tracy DuBay, Principal Investigator
    Chad Frerich, Student Investigator

From: Mary Lagerwey, Ph.D., Chair

Re: HSIRB Project Number 05-09-18

This letter will serve as confirmation that your research project entitled “Budgeted Money in Staff Development and Technology Integration” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: October 18, 2006
APPENDIX B
SURVEY INSTRUMENT
The following survey is based on the Technology Use Questionnaire (Insights 2003). Additional items were included to gather demographic data and other information needed to complete the study.

Demographics

School District Information

1. What is the student population of the district?
2. What is the student population of your building?
3. What is the average class size?
4. What percentage of students in your district receives free or reduced lunches?
5. What percentage of the district's yearly budget is spent on technology related staff development?
6. What amount of money was spent on technology related staff development from other sources, i.e. grants, state initiatives, etc.?

Teacher Information

1. What grade level do you teach?
2. What subject do you teach (if elementary please indicate)?
Access To Computer Support

1. Does your school have a dedicated computer support technician?
   Yes
   No

2. What is the average response time for your computer questions and/or problems?
   Immediate

3. How many hours did you spend last year outside of school time using and learning technology?

4. How old are you?
   Less than 1 hour
   1 to 8 hours
   Days to Weeks

3. Does your building have a 'technology coach' that is able to assist you with computer issues?
   Yes
   No

Computer Access

1. Do you have computer access at school?
   Yes
   No

2. Do you have computer in your classroom?
   Yes
   No
Questionnaire

Please indicate how strongly you agree or disagree with each statement. (The following statements were rated with the following scale: Strongly Agree, Disagree, Neither Disagree nor Agree, Agree, Strongly Agree.)

1. I am motivated to find ways to use the computer(s) in my classroom.

2. I assign daily or weekly computer-related tasks that support my curriculum (analyzing data from a survey, creating multimedia presentations that showcase students' understanding of important content, researching information via CDs or the Internet).

3. My students have access to all forms of technology and computers at any time during the instructional day.

4. I provide short-term (daily or weekly) assignments using the classroom computer(s) that emphasize the use of different software applications (such as spreadsheets, databases, Internet use, and multimedia).

5. I alter my instructional use of the classroom computer(s) as I gain new knowledge of software applications and research on teaching and learning.

6. One of my technology goals is for students to be
able to use the classroom computer as another tool for learning.

7. I find computers to be an important part of classroom instruction.

8. I seek professional development that maximizes the use of the computers and technology available to my students.

9. I allocate time for students to practice their computer skills on the classroom computer(s).

10. My students eagerly pursue the use of the classroom computers.

11. Using the classroom computer(s) is a priority for me this school year.

12. I use the computer for my own continuing education.

13. I have enough time to use the classroom computer(s).

14. I need more and/or more current computers in order to use technology with my classroom instruction.

15. I have an immediate need for more professional development in order to design student-centered, integrated curriculum units that use the classroom computer(s) in a seamless fashion.

16. My students use the Internet for collaboration with others, including joint publishing, communicating, and researching to solve authentic problems.
17. I seek out activities that promote increased problem-solving and critical thinking using the classroom computer(s).

18. I plan computer-related activities in my classroom that will improve my student's basic skills (e.g., reading, writing, math computation).

19. In my classroom, students use technology-based computer and Internet resources beyond the school (NASA, other government agencies, private sector) to solve authentic problems.

20. One of my professional goals is to learn more ways to use computers in seamless instruction (i.e., it is as easy for me as using a chalkboard.)

21. It is easy for me to design student-centered, integrated curriculum units that use the classroom computer(s) in a seamless fashion.

22. I prefer to use existing curriculum units that integrate the classroom computer(s) with authentic assessment and student relevancy rather than building my own units from scratch.

23. I use my students' interests, experiences, and desires to solve authentic problems when planning computer-related activities in my classroom.

24. Using available technology and computers, I have expanded the horizons of instructional computing in my classroom.
25. I use integrated curriculum units that place heavy emphasis on complex thinking skills, computer use, and student relevancy to the real world.

26. I use my classroom computer(s) primarily to track grades and/or answer email.

27. I rely on others (student assistant, parent volunteer, close friend) to do my computer-related tasks for me in my classroom.

28. I access the Internet quite frequently.

29. I am proficient with basic software applications (word processing, Internet applications, CD ROMs, Games).

30. I am proficient with at least one multimedia authoring tool (such as HyperStudio, PowerPoint, KidPix, or AppleWorks).

31. I integrate the most current research on teaching and learning when using the classroom computers.

32. I have the background to show others how to merge technology with integrated, thematic curricula.

33. I am very comfortable using a computer.

34. I find the use of computers to be practical for my students.

35. I am able to troubleshoot various software problems such as translations, compression of image files, and cross-platform issues.

36. I actively participate in online collaboration opportunities.
APPENDIX C
INFORMED CONSENT
Informed Consent

You are invited to participate in a research project entitled "Budgeted Money In Staff Development and Technology Integration." This study has been designed to analyze the relationship between technology-related staff development expenditures and the amount of technology integration in the classroom.

The study is being conducted by Dr. Tracy DuBay and Chad Frerichs from Western Michigan University, Department of Educational Technology. This research is being conducted as part of the thesis requirements for Chad Frerichs. It is hoped that with a better understanding of this relationship school districts will better be able to budget money and plan technology related staff development.

You are being invited to complete an online survey instrument. This survey is comprised of 51 questions covering areas of demographics and technology use. Your replies will be completely anonymous and stored on a secure server accessible only by authorized individuals including Dr. DuBay and Chad Frerichs from WMU, and Dr. Peet, Dr. Whitworth and Bryce Benton (from The University of North Texas). You may choose to not answer any question and simply leave it blank. You may exit the survey at any time without submitting any information by simply closing the browser window. If you choose to not participate in this survey simply exit this browser window. Submitting the survey indicates your consent for use of the answers you supply. Findings from this survey will be reported in an aggregate form from which individuals cannot be identified by their responses. If you have any questions, you may contact Dr. Tracy DuBay at dubay@wmich.edu, Chad Frerichs at 712-320-2287 or chad.m.frerichs@wmich.edu, the Human Subjects Institutional Review Board (269-387-8293) or the vice president for research (269-387-8298).
APPENDIX D
LETTER TO SUPERINTENDENTS
LETTER TO SUPERINTENDENTS

You and your staff are invited to participate in a research project entitled "Budgeted Money In Staff Development and Technology Integration" designed to analyze the relationship between the amount of money spent on technology related staff development and the amount of technology integration in the classroom. The study is being conducted by Dr. Tracy DuBay and Chad Frerichs from Western Michigan University, Department of Educational Technology. This research is being conducted as part of the thesis requirements for Chad Frerichs.

In order for your staff to be able to complete the survey accurately we ask that you forward the information required to answer the following questions to them in them using the attached form either through email or hard copy. In addition to the information we ask that you invite their participation. The survey is composed of 51 questions and should take no more than 30 minutes of your staff’s valuable time. The survey is entirely online and will be hosted at The South Central RTEC Instrument Library and Data Repository at the following URL. (URL to be inserted after finalization of instrument)

To complete the survey, your staff will need information sufficient to answer these questions:

1. What is the student population of the district?
2. What is the student population of your building?
3. What is the average class size?
4. What percentage of students in your district receives free or reduced lunches?
5. What percentage of the district’s yearly budget is spent on technology related staff development?
6. What amount of money was spent on technology related staff development from other sources, i.e. grants, state initiatives, etc.?

We appreciate you considering participation in this important study and look forward to receiving results from your district.

Sincerely,

Dr. Tracy DuBay and Chad Frerichs
APPENDIX E
SUBJECT RECRUITMENT SCRIPT
SUBJECT RECRUITMENT SCRIPT

Our staff has been invited to participate in a research project entitled "Budgeted Money In Staff Development and Technology Integration" designed to analyze the relationship between the amount of money spent on technology related staff development and the amount of technology integration in the classroom. The study is being conducted by Dr. Tracy DuBay and Chad Frerichs from Western Michigan University, Department of Educational Technology. This research is being conducted as part of the thesis requirements for Chad Frerichs.

In order to properly complete the survey, if you choose to do so, you will need the information provided to answer the following questions.

1. What is the student population of the district? Answer:<insert answer>

2. What is the student population of your building? Answer:<insert answer>

3. What is the average class size? Answer:<insert answer>

4. What percentage of students in your district receives free or reduced lunches? Answer:<insert answer>

5. What percentage of the district's yearly budget is spent on technology related staff development? Answer:<insert answer>

6. What amount of money was spent on technology related staff development from other sources, i.e. grants, state initiatives, etc.? Answer:<insert answer>

Feel free to participate in this survey at http://insight.southcentralrtec.org/ilib/frerichs/demo.php.

Sincerely,
APPENDIX F
RAW THESIS DATA
### Survey Data

**Questions**

**Student Information**

- What is the student population of the district? 2021: 2021, 2020: 2020
- What is the student population of our building? 2021: 2021, 2020: 2020
- What is the average class size? 2021: 2021, 2020: 2020
- What percentage of students in your district receive free or reduced lunches? 2021: 2021, 2020: 2020
- What percentage of the district’s year budget is spent on technology-related staff development? 2021: 2021, 2020: 2020
- What amount of money has spent on technology-related staff development from other sources i.e. state resources etc.? 2021: 2021, 2020: 2020

**Teacher Information**

- How many hours did you spend last year outside school time using and learning technology? 2021: 2021, 2020: 2020
- Does your building have a technology coach that is able to assist with computer issues? 2021: 2021, 2020: 2020
- Does your classroom have computer access? 2021: 2021, 2020: 2020
- Do you have computer access at school? 2021: 2021, 2020: 2020

**System Information**

- What is the average response time for your computer questions and/or problems? Immediate, Less than an hour, 1 to 3 hours, 3 to 5 hours, 5 to 8 hours, 8 hours or more
- Does your building have a technology coach? 2021: 2021, 2020: 2020
- Does your building have a dedicated computer technician? 2021: 2021, 2020: 2020
- What is the average response time for your computer questions and/or problems? Immediate, Less than an hour, 1 to 3 hours, 3 to 5 hours, 5 to 8 hours, 8 hours or more
- Does your building have a technology coach? 2021: 2021, 2020: 2020
- Does your classroom have computer access? 2021: 2021, 2020: 2020
- Do you have computer access at school? 2021: 2021, 2020: 2020
- Do you have computer access in your classroom? 2021: 2021, 2020: 2020
<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Strongly Agree</th>
<th>Slightly Agree</th>
<th>Neutral</th>
<th>Slightly Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am motivated to find ways to use the computer in the classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I assign data or weekly computer-related tasks that students must complete, analyzing data from a survey, creative multimedia presentations, and CCI to be the emphasis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do students have access to all forms of technology and computers at all times during the instructional day?</td>
<td>Slightly Agree</td>
<td>Slightly Agree</td>
<td>Neutral</td>
<td>Slightly Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>Improve short-term data on weekly assignments using the classroom computers that emphasize the use of different software applications such as spreadsheets, databases, Internet use, and multimedia:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take the instructional use of the classroom computers to gain the knowledge of software applications and research on teaching and learning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One of my technology goals is for students to be able to use the classroom computer as another tool for learning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find computers to be an important part of classroom instruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I see professional development that maximizes the use of the computers and technology available to my students.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Allocate time for students to practice their computer skills in the classroom computers</td>
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<tr>
<td>It's important for students to practice their computer skills in the classroom computers</td>
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</tr>
<tr>
<td>Changing the classroom computer lab's content for this instructional year.</td>
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</tr>
<tr>
<td>Note the computer for my own computer education</td>
<td></td>
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<tr>
<td>There's enough time to use the classroom computer</td>
<td></td>
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<tr>
<td>Need more and or more current computers in order to use technology.</td>
<td></td>
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<tr>
<td>I have an immediate need for more professional development in order to design student-centered integrated curriculum units that use the classroom computers in a seamless fashion.</td>
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</tr>
<tr>
<td>Students use the Internet for collaboration with others, including peer publishing, communicating, and researching to solve arithmetic problems</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Survey Data Continued</td>
<td></td>
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<td>-----------------------</td>
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</tr>
<tr>
<td>I see the advantages that computer-based problem-solving and critical thinking offer the classroom experience.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I plan computer-related activities in my classroom that reinforce specific student needs, such as reading, science, math, and social skills.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>In my classroom, students use technology-based computer and Internet resources beyond the school's database in a variety of non-academic settings.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>One of my professional goals is to learn more about computer-related activities in my classroom.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I prefer to use existing curriculum units that integrate the classroom component into a seamless lesson plan.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I consider the students' interests, experiences, and desires in some authentic problems when designing computer-related activities in my classroom.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I use a variety of technology and computer skills a student's success in the classroom can depend on their ability to use the computer.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I design integrated curriculum units that place an emphasis on computer learning and student readiness in the real-world setting.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I organize the classroom component to train grades and to address real-world issues.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I plan on other's formal assistance, parent involvement, and support from other computer-related training for my classroom.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I am proficient in basic software applications and concepts, such as word processing and spreadsheets.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I am proficient in at least one multimedia authoring tool, such as Adobe After Effects, PowerPoint, Flash, or another software program.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I integrate the most current research on teaching and learning, including the application of computer programs.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I am able to integrate computer technology into integrated thematic units.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I am able to communicate effectively in a classroom setting.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I am able to use technology to support students' learning.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I am able to understand and use software, such as spreadsheets, computer programs, and Internet resources.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>I am able to integrate in some collaborative opportunities.</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
</tbody>
</table>