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Implementation of the Elementary Classroom Computer Initiative: A Description of the First Year

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**Implementation of the Elementary Classroom Computer Initiative:
A Description of the First Year**

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***The views expressed in MERC publications are those of individual authors and
not necessarily those of the Consortium or its members**

Implementation of the Elementary Classroom Computer Initiative: A Description of the First Year

EXECUTIVE SUMMARY

Henrico County Public Schools received funding to place five computers and an ink jet color printer in each of its first through fifth grade regular classrooms. The goals of the initiative were numerous but focused in part on: increasing performance, addressing different learning styles, increasing students' daily access to computers, increasing student proficiency with computers, and preparing students for the future.

Purpose. The Metropolitan Educational Research Consortium (MERC) was engaged to conduct an on-going formative and summative evaluation of the initiative spanning a five year period. This summary addresses the first year and provides a description of the implementation phase of the initiative. This first report examines the following questions:

- How does teacher background impact implementation factors?
- Has instructional behavior and classroom administration been altered?
- How has training been perceived?
- What barriers currently hinder the implementation of the initiative?
- What barriers have hindered the implementation of the initiative in the past?
- Who is providing teachers with support for the initiative?
- What factors are responsible for the "success" of the implementation?
- What was the most "difficult" part of implementing the initiative, what was the "easiest?"
- What is the feedback from teachers, students, and division personnel concerning the initiative?

Methodology. Eight schools were randomly selected by the school division to take part in the study (i.e., phase 1: implementation). First through fifth grade teachers (N=98) from these schools completed a 127 item survey developed for the project by MERC in conjunction with division personnel. A group of teachers reviewed the survey before it was administered. Additional information for this report was obtained by interviewing personnel critical to the implementation of the initiative.

Data Analysis. Data were obtained by analyzing teacher responses to the survey items and asking a predetermined set of open-ended questions during interviews with four division personnel critical to the implementation.

The relationship between selected survey items were examined in detail if three criteria were met: the items were significantly correlated, one item explained 14% or more of the variance in the other item, and the items' relationship appeared to be relevant with regard to implementation issues and/or represented some underlying logical concept that could be related to the initiative.

Summary of Major Findings.

- More veteran teachers may have had a more difficult time adjusting to the initiative than their less veteran counterparts, as suggested by veteran teacher's lack of confidence in their computer ability.
- A majority of teachers were not prepared in their undergraduate programs to use computer technology.
- Overall, there was an increase in teachers' self-perceptions of computer ability post initiative. Greater increases were witnessed for teachers who described themselves as self-taught (i.e., they have learned some computer skills on their own).
- Teachers who reported benefiting from initiative training also tended to report that their instruction has changed compared to teachers who reported less benefits from training.
- Overall, perceptions of initiative training were extremely positive, more so than perceptions of software training. However, positive perceptions of software training was associated with development of materials and in better classroom administration of grades, student information, and communication. Q13
- The principal can play a vital role in the initiative but his or her role may need to be clarified. Some teachers felt they couldn't assess the principal's role regarding support, while others reported it as being less than average. Q14 and Q15 *
- Those teachers who saw overall administrative support as adequate also reported a great deal of support from fellow teachers. Q22 *
- The most consistently reported barrier to the implementation of the initiative was a lack of planning time for teachers. Q100-104
Q105-109
Q110-Q114
- Clear communication was also reported as being an important part of the implementation.
- It was reported that the "easiest" part of the project was "buying into the initiative," the most "difficult" part of the initiative was the time pressure from attempting to meet the project deadlines.

The following **recommendations** are offered:

- Increase teacher exposure to computers and opportunities to practice.
- Pay particular attention to veteran teacher's concerns (they may have the most difficulty adjusting to computers in the classroom).
- Emphasize on building confidence as well as knowledge in training initiatives. Specifically, efforts should be made toward motivating teachers to use their new skills and knowledge. With increased confidence in ability and motivation to use technology greater and more positive changes in instructional behavior are more likely.
- Determine if software required to learn is too much to build confidence in software training (confidence that may lead to trying new things in the classroom with software).
- Clarify the role of the principal.
- Increase teacher planning time.
- Communicate the "big picture" to teachers (What is expected of them and the initiative).

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Implementation of the Elementary Classroom Initiative: A Description of the First Year

Preface

This report was commissioned by Henrico County Public Schools to evaluate the implementation of its elementary classroom computer initiative. It describes the first year of the initiative and is the first formative evaluation report. The complete evaluation project will span five years. This report is descriptive only, however, subsequent reports will be more inferential in nature, e.g., examining the impact of the initiative on student performance.

This report focuses on how the implementation has been perceived by teachers, students, and school division personnel. *The primary focus was on teacher perceptions* of the implementation phase of the initiative. The study involved surveying teachers and interviewing division personnel. Several focus groups were conducted as well and some of the comments support findings discussed in this report. Additionally, recommendations are presented to optimize the effectiveness of the initiative as well as assist the division in future implementations.

John Pisapia
Metropolitan Educational
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Introduction

In 1995, Henrico County Public Schools received funding to place five computers and an ink jet color printer in each of its 1st through 5th grade regular elementary classrooms. The goals of the initiative were numerous. Primarily, it was reported that the division wanted to 1) increase performance of its students, 2) address the different learning styles of the students, 3) prepare the students for the future in which computers will play a large part, 4) provide students with daily access to computer technology, and 5) increase student proficiency with computers.

The initiative represents a major undertaking by the division. Over 600 classes are affected by this initiative; hundreds of teachers had to be trained on computer use and software; numerous electrical systems had to be upgraded; curriculum had to be developed; tasks had to be conducted simultaneously in order to meet the numerous deadlines by the end of the first year.

As part of the Henrico school division's effort to determine the effectiveness of technology in their classrooms, they commissioned the Metropolitan Educational Research Consortium (MERC) to conduct an on-going formative and summative long term evaluation of the initiative spanning a five year period. Such descriptions of implementation of technology according to Becker (1990) occur all too infrequently. Further, such information can assist other schools interested in implementing technology, subsequently assisting others in avoiding common pit-falls and re-inventing the wheel or from learning via trial and error. This information will also directly assist Henrico in the implementation of other technology initiatives.

Purpose of the Study

The following research questions will be addressed as part of the five year initiative:

1. How does student achievement compare across the thirty-four schools?
2. Is there a relationship between student achievement and instructional factors such as teacher attitude towards technology?
 - Is there a relationship between student achievement and the type of courseware/software used (CAI, CMI, CEI, i.e., multimedia, CD-ROM, E-mail)? Were any particular software programs more effective than others?
 - Did curricular instructional practices change? Have teachers changed their curricular emphases? Did any imbalances in curricular emphasis occur (i.e., an increase in time devoted to math)? Did teachers change their teaching style? Did teachers use their allocated time differently than prior to the installation of the computers in their classrooms? Did teachers integrate computer activities into their regular classroom activities?

Were the computers more effective for the delivery of particular kinds of instruction to such students? Did programs in which teachers emphasized higher order and critical thinking skills result in greater student achievement?
3. Is there a relationship between student achievement and school context and policy factors such as student population characteristics, years in operation, grade level, program/class size, student computer/ratios, time on task and other resources allocation decisions?
4. Is there a relationship between student achievement and program implementation

factors?

- How do schools in this study compare on the manner in which they implemented the initiative? Do school staff understand the assumptions undergirding the technology options they use? Have there been changes in the way the computers have been used since the initiative was first implemented? Why did those changes occur? Were they successful? What new school initiatives did the computers stimulate?
- What management and coordination issues had to be overcome to implement the initiative (i.e., scheduling procedures, student transfers etc.)? Were there territorial problems to overcome? How were management and coordination problems overcome?
- Is there a relationship between student achievement and the configuration of the technology? (ILSs, distributed labs).

What program implementation factors (i.e., number of students using computers, how long, how often) influence student achievement? Did concrete implementation factors (time on task, type of program) affect achievement gains more than abstract ones (utilization of feedback, perceived usefulness of training)?
- Is there a relationship between student achievement and personnel factors such as classroom and specialized teacher's characteristics, involvement in placement, staffing problems, student staff ratios, amount of perceived usefulness of training, and administrative support?

This report is the first of five reports that will be submitted as part of the on-going formative evaluation. It details the implementation of the Elementary Classroom Computer Initiative (ECCI) at the end of the initiative's first year. Specifically, the following questions are examined in this report:

- How does teacher background impact implementation factors?
- Has instructional behavior and classroom administration been altered?
- How has training been perceived?
- What barriers currently hinder the implementation of the initiative?
- What barriers have hindered the implementation of the initiative in the past?
- Who is providing teachers with support for the initiative?
- What factors are responsible for the "success" of the implementation?
- What was the most "difficult" part of implementing the initiative, what was the "easiest?"
- What is the feedback from teachers, students, and division personnel concerning the initiative?

This report focuses on quantitatively (via surveys) and qualitatively (via interviews) describing how Henrico implemented its computer technology initiative. As such, it should be regarded as *description only*.

Method

Participants

Population/Sample

Schools. Thirty-four schools took part in the initiative. A random sample of eight was obtained for in-depth analysis, these schools are discussed below. Six of the eight schools that took part in this study had an enrollment of 300-600 students, of the other two schools, one had a student population of less than 300, while the other had over 600 students enrolled. The racial make-up of the schools were as follows: Three schools' populations consisted primarily of African-American students while the other five had a majority of Caucasian students. Economically the schools differed as well. Five schools' populations were described as having 53% or more families categorized as middle class to very affluent. Three schools' populations were described as having 47% or more families categorized as working poor to very poor.

Interviews. Interviews were held with four individuals critical to the implementation of the initiative. The individuals selected to be interviewed were: Directors of technology, elementary education and instruction, and the assistant superintendent of instruction. Interviewees were asked a set of open-ended questions about technology in general and in specific as it relates to the initiative. The interviews were held individually and lasted from forty-five minutes to an hour and forty-five minutes. The questions utilized for the interviews are provided in the appendix.

Documentation. Review of written documents (i.e., weekly updates of the ECCI steering group) was conducted to provide a foundation from which to understand the

initiative and therefore will not be discussed further.

Survey. First through fifth grade teachers from the eight schools described above responded to a 127 item survey (described in the materials and procedure sections). Ninety-eight (N=98) completed the survey assessing such things as perceived support for the initiative, instructional behavior, training etc. The survey developed for the evaluation project assesses the attitudes and perceptions of the teachers concerning the initiative, also demographic information was obtained, e.g., gender, ethnicity, undergraduate degree area, number of years teaching etc. See the appendix for a copy of the unabridged survey (a smaller version will be constructed to be administered to all the schools in the initiative at a later time).

The survey items were developed by the research team along with personnel from the school division. The process included the development of drafts by the research team followed by meetings with school personnel to discuss the items with regard to relevancy, clarity, and appropriateness. The final draft was reviewed by a group of teachers familiar with the initiative. Changes were then made to the surveys and delivered by the division to the eight school's first through fifth grade teachers (a total of 144 surveys were sent out).

The surveys were administered to teachers at randomly selected schools. Teacher responses were placed into a data file by school division personnel and delivered to the research team for descriptive analysis.

Surveys

Ninety-eight teachers responded to the survey, representing a response rate of 68%. The survey's Cronbachs' alpha was calculated to be .89 (n=65). Type and percentages of responses are provided in the appendix along with correlations of items from survey sections one through five. The percentages provide a good description of how teachers perceived certain aspects of the first year of the initiative (i.e., the implementation). The correlations reveal what items tend to be associated with one another as well as the nature of the association, i.e., positive or negative relationships -- which may provide good insights into the first year of the project.

Data Analysis

In order to examine the relationship selected items have with one another the following procedure was undertaken to assess one item's relationship to another (i.e., certain items were investigated concerning how specific responses to item X were associated with specific responses to item Y).

The data were assessed to determine if a significant correlation existed between two items. Then the relationship was examined to determine if the degree of variance in one item could explain variance in another. Finally, the data were examined to determine if the items seem to represent some underlying issue that was relevant and interpretable.

Items to be analyzed were selected utilizing a three step procedure meeting the following criteria: Items that were significantly correlated ($p=.05$ or less), which could explain fourteen percent or more of the variance in an item (using eta squared, defined

in the appendix), and were relevant/interpretable were examined in detail via cross tabulations and are discussed below. The criteria employed for relevancy focused on whether the relationship between items seemed to be addressing implementation issues such as teacher acceptance of technology and teacher perception of training (factors that are most relevant in the first year). Interpretable-ness was “demonstrated” if the relationship between items represented some underlying logical concept that could be related to the initiative.

Several items met these criteria (i.e., significantly correlated and 14% or more of the variance explained and were readily interpretable) from the following categories: teacher background, teacher computer ability, planning instructional programs, instructional delivery, development of material, and initiative support. The explained variance and crosstabulations are presented in the next section. Barriers to implementation will be addressed at the end of this section by highlighting the barriers seen as most and least difficult.

Findings

Teacher Background

Teacher experience is systematically related to whether they were 1) self-taught, 2) exposed to computers in their undergraduate training program, and 3) novice technology users. **Item 4** reports the number of years teaching; item four explains 14% or more of the variance in several items: 9, 12, 33, and 34.

Self-taught.

Item 9 assesses whether or not teachers considered themselves self-taught

regarding computer use. In general, there was a slight tendency for teachers to have considered themselves self-taught. The more years one has taught the more likely the individual was to express the contrary opinion, i.e., their computer knowledge was not self-taught. The most veteran teachers (i.e., 14 or more years of teaching) consider themselves not to be self-taught 65% of the time. The reason behind this could be a lower comfort level with computers as well as a lack of consistent exposure, exposure newer teachers are more likely to have.

Undergraduate Training.

Item 12 addresses if undergraduate degree courses taken included a focus on computer use. A majority of teachers approximately 82% reported that their program's did not have computer courses. Again, veteran teachers' programs did not offer such programs during their initial training. Ninety-eight percent of the most veteran teachers were not exposed to computers in college courses.

Computer Knowledge prior to Initiative.

Item 33 focused on teachers' self perception of computer knowledge the year prior to the initiative. Over half (56%) reported having average ability: being able to "perform basic tasks... quite well ... but didn't know enough to use the software to its fullest potential." Veteran teachers represented the largest group (42%) describing themselves as non-users or beginners (i.e., "performing simple tasks on the computer with some difficulty").

Current Computer Knowledge.

Item 34 addressed current self-perceived knowledge of computers. Overall,

teachers reported gains in their computer ability. No teacher considered themselves a non-user currently. There was a trend for less veteran teachers to have more professed ability with computers. Approximately, 60% of the less veteran teachers saw themselves as advanced users, compared to 30% of the more veteran teachers. Again, this is likely due to factors such as increased opportunities of exposure (due to the increased prevalence of technology) and initiative training.

These items suggest that exposure to computers in conjunction with training may be beneficial when it comes to self-perceptions of computer knowledge and ultimately comfortableness with computers. It could be surmised that the veteran teachers simply have lacked computer enriched environments during their tenure, unlike their less veteran counterparts.

Teacher Computer Ability

Self-taught.

Teachers who were self-taught (reported that they trained themselves to some degree on the use of computers) were more likely to have classified themselves as technology users prior to the initiative than those who were not self-taught. Teachers who were self-taught were also more likely to classify themselves as expert technology users after the first year of the initiative than teachers who were not self-taught.

Prior to the initiative, teachers who considered themselves self-taught, 65% of the time reported having average computer ability (i.e., "perform basic tasks... quite well ... but didn't know enough to use the software to its fullest potential."). Those teachers that considered themselves not self-taught, 46% of the time reported having average

computer ability (described above) after the initiative began. Those teachers who have taught themselves some computer skills may 1) have more access and opportunity to instruct themselves and 2) possibly be more motivated and comfortable with technology such as the computer. Consequently, their reported ability reflects this.

After the initiative, teachers who reported themselves as self-taught reported having average computing ability 18% of the time as compared to 65% prior to the initiative, the difference results from perceived increases in ability. Specifically, prior to the initiative only 8% of the teachers reported being expert (i.e., knowing a great deal about computer hardware, software, and their use, and can perform many tasks with a variety of software) whereas after the initiative 32% of those self-taught and 13% of those not self-taught considered themselves expert.

Perceived changes in ability.

By examining the change in certain categories of reported computer ability (prior and post initiative) we can gauge indirectly teachers increasing confidence due to enhanced computer exposure and training related to the initiative. For those teachers who did not consider themselves self-taught, there was a reported 13% increase in self-ratings of expert computer user (described above). This was nearly doubled by those who were self-taught (24%). A similar increase of 32% was seen for the advanced computing ability category for teachers who considered themselves self-taught as well as those who did not.

Teachers who considered themselves self-taught reported greater gains in perceived computer ability (i.e., referring to themselves as expert) than those teachers who reported themselves not to be self-taught. However, no difference was evident

between those self-taught and those not self-taught for the advanced computing ability category. Specifically, self-taught and not self-taught teachers demonstrated the same amount of increase in the advanced computing ability category.

Planning Instructional Programs

Teachers who reported they benefited from the training program (item 19) were more likely to respond that “technology has created greater opportunities for me to plan the instructional program for my students”, “technology has changed my approach to classroom management and instruction,” and “technology integration has allowed students to become more self-reliant” than teachers who did not benefit from the training program.

The teachers who strongly agreed (65%) that they benefited from the initiative training also tended to agree that technology has created greater opportunities for them to plan instructional programs for their students. Eighty-seven percent (87%) of the teachers who reported that they benefited greatly from initiative training also reported agreeing or strongly agreeing that their classroom management and instruction has changed. Ninety-six percent (96%) of the teachers who reported agreeing or strongly agreeing that they benefited greatly from initiative training also reported that technology integration has allowed students to become more self-reliant.

The relationship between training and in class teacher behavior possibly point to an underlying confidence in technology generated by training, leading to increased “chances” being taken by such teachers in the classroom, regarding instruction and management. That is, confidence promotes an “I’ll give it a try” attitude, which leads to

certain changes in behavior.

Instructional Delivery

Teachers who perceived software training as adequate were more likely to report they were better able to plan and manage: their classroom, grades, communication, and student information. Additionally, they felt they could present more complex material and that there was more student responsibility for learning the material.

Item 22 assesses teacher's perceptions of training on curriculum content software. Item 22 met the criteria established for further analysis for two items: "the computer initiative allows me to better manage my classroom instruction and "as I plan for the subject matter to be presented in a lesson, I also plan how technology can be used to implement the unit". Overall, very few reported a strong degree of agreement (i.e., "strongly agree") that software training was adequate a stark contrast to the overall view of the initiative training. However, a majority did agree (53%) with this statement. One possible reason for this is the number of software packages teachers had to learn. That is, the number of programs required to learn was simply too great to generate a great deal of confidence in training.

A majority of the teachers (56%) that agreed that software training was adequate also agreed that the computer initiative allows for better managed classroom instruction. Sixty-nine percent of the respondents that agreed that software training was adequate also agreed that they integrate technology in instruction. Understanding that there is room for increased confidence in software training, increasing confidence may lead to an increase in the number of teachers that utilize computers to manage instruction as well

as integration of technology in instruction.

Development of Materials

The development of materials as a result of software training is associated with several instructional delivery items and one item concerning outcome i.e., “students becoming more self-reliant because of technology integration”.

Item 23 addresses software training’s impact on the development of materials and classroom administration. Again, very few reported a strong degree of confidence (i.e., “strongly agree” responses) for this aspect of training. However, 54% of the teachers did agree with the statement.

Forty-two percent of the teachers who reported that software training has assisted them with the development of materials and classroom administration did not feel that they were better able to present more complex material to students (however, 38% of the teachers did). This requires further exploration in order to determine why almost an equal number of teachers who felt this type of training met their needs responded differently in their perception of being able to present more complex materials to students. It is possible that how teachers use the software (or the type of software) may be the difference.

Teachers who saw software training as meeting their needs also reported that they agreed with the statement that the initiative has allowed them to better manage classroom instruction (59%). A similar relationship was seen between item 82 dealing with managing grades, communication, and student information, and item 23: the perceived quality of software training for classroom management and instruction.

Specifically, 54% of the respondents agreed to both items 82 and 23. Items 84: "as I plan for the subject matter to be presented in a lesson, I also plan how technology can be used to implement the unit", 85: "technology has created greater opportunities for me to plan the instructional program for my students", and 88: "technology integration has allowed students to become more self-reliant" were agreed to 60%, 69%, and 68% of the time respectively by teachers who agreed to the statement that software training to assist them with the development of materials and classroom administration met their needs.

The previous items demonstrate that there is room for improvement in the software area of training **when compared** to the teachers' overall impression of the initiative training. Recall that 65% of the teachers **strongly agreed** that they benefited from the initiative training, but they were less enthusiastic about software training in general. Again, it should be noted that the sheer number of software packages teachers are asked to learn may play a role in their perceptions of this area of training.

Initiative Support

This section assessed teachers' perceptions of the quality of support for the initiative from a variety of sources. The specific items and their relationship with other selected items will be discussed in detail below.

Computer Contact.

Item 25 assessed the degree of support teachers perceived the school's computer contact as providing. Overall, 89% of the teachers saw computer contact personnel's support as average to excellent. Additionally, nearly 50% of the teachers

who saw computer contact's support as average to excellent also agreed that staff development programs related to technology met their needs (i.e., item 89: "the staff development programs related to technology have met my needs").

Technology Instructors.

Item 27 assessed the degree of support teachers perceived technology instructors as providing. Approximately 50% of the teachers reported that technology instructors provided average support. Seventy-one percent of the teachers who saw technology instructors' support as average also agreed with the statement that administrative support was adequate as well (item 90: "I feel I have adequate support from administration").

Computer Instructional Assistant.

Item 28 examined the degree of support teachers perceived the computer instructional assistant as providing. Seventy-nine percent saw support as average to excellent. Item 28 met the criteria for further examination for item 90 which asked if teachers thought they had adequate support from the administration. Most teachers agreed with this statement (66%). Fifty-six percent of the teachers who saw the computer instructional assistant as providing excellent support also saw administrative support as adequate (i.e., agreed with the statement that support from administration was adequate). The presence and ability of the assistant on-site could be seen by teachers as support from the administration.

Administrative Support.

Item 29 assessed the degree of support teachers perceived the school's principal as providing. There was a wide range of opinions on this issue. Thirteen percent felt they couldn't respond to this question at all (i.e., **they don't know**), others (25%) thought support was less than average or that they received no support. Sixty-one percent felt principals provided excellent to average support. It should be noted that some teachers, around 39%, couldn't respond to this item or thought support could be improved. Most teachers who saw the principal's support as average also saw item 90 concerning administrative support as adequate 97% of the time. This basically represents the notion that the principal plays an important role in how the teachers see administration. The principal can play a critical role in providing support to teachers, a role the data suggests, could be improved or clarified.

Item 32 assessed overall/administrative support. Most teachers (87%) thought support from this source was adequate. Similarly, 93% who saw overall/administrative support as adequate also reported receiving instruction from other teachers (item 16). This points to an overall sense of teamwork at the school level. The teachers are supportive of each other when it comes to technology, specifically computers in the classroom: "they are all in it together."

Perceived barriers to the initiative

Overall, the barrier reported as being most difficult was the lack of planning time. The least difficult barrier as reported by the teachers was a lack of building level leadership. This is not an endorsement of building level leadership, just a perception

that it was not a barrier as far as the initiative is concerned.

Barriers to instructional delivery.

Teachers reported that a lack of planning time to develop lessons was the most difficult barrier concerning instructional delivery. Forty percent of the teachers agreed with this statement. The area of least concern, according to teacher perceptions was a lack of knowledge of computers being too weak to use them effectively, forty-five percent of the teachers held this view. The teachers appear to be somewhat confident in their knowledge of computers and don't perceive lack of computer knowledge as presenting a problem.

Barriers associated with hardware issues.

The most difficult barrier according to teachers was frequent printer problems. Thirty-nine percent of the teachers agreed that printer problems were a major concern. The least bothersome hardware problem was seen as understanding the technical side of the initiative. Thirty-one percent of the teachers agreed with this assessment.

Barriers of the past associated with the initiative overall or administration.

The teachers reported that a lack of planning time to be a major road-block to the initiative. Teachers agreed with this assessment 32% of the time. A close second was a lack of hardware, agreed to by 29% of the teachers as the most difficult barrier. Again, the least difficult barrier of the past was reported by 57% of the teachers as being a lack of building level leadership.

*2nd.
year now that they've
learned → execution
focus req. greater
leadership?*

Barriers that currently hinder the initiative.

The teachers reported that the most difficult barrier they currently face is lack of planning time. Fifty-six percent of the teachers agreed with this statement. The least problematic issue, again, was lack of building level leadership, 58% of the teachers agreed with this assessment. In summary it appears that the primary obstacle to the initiative is a general perception that teachers have that they lack the time to appropriately prepare and utilize the computers to their fullest potential.

Interviews

The format for the interview results is as follows: presentation of general views of technology and an overview of the implementation; the factors involved in hardware, software and training; feedback from teachers, students, and administrative personnel at the division concerning the implementation of the initiative.

General Issues

Why is technology in the Classroom? The views held here are that technology (computers etc.) is an integral part of the present and the future. Technology and specifically computers are seen: as part of the philosophy of "cutting edge" instruction, and a connection to the real world. Technology is increasingly seen as a valuable tool. A tool that may become in the future as invaluable and prevalent as a pencil is today. Computer technology can cater to different student learning styles, motivate young people to want to learn, and of course under certain instances enhance learning and performance, it is another source of knowledge, providing technical skills and technical literacy. The vision or goal is seen as one in which technology is

transparent. That is, it is so commonplace and tied into instruction as to not even be noticed, i.e., fully integrated. The use of technology is not an end point but part of a process -- the process of learning.

What do you hope to accomplish with the use of technology? The common goals discussed here dealt with items such as increased academic performance, practical and cognitive skill development, preparation for the "real world" workplace, and developing self-reliant students, etc. The focus should be on knowledge not the computer, the goal of total integration. But another item tied to the technological age was also mentioned. For example, it was expressed that there was a desire to make students information savvy, that is, to have students be able to be intelligent consumers of information, information that increasingly is becoming available at the stroke of a key.

Who is responsible for the vision of technology? The belief here is that all share a common view of technology: its role, its potential, and the dedication to its implementation into schools. This vision is shared by all the key players, but starts at the top. The superintendent of Henrico is toted as being a driving force in the ECCI. His vision has been transmitted throughout the schools: "You cannot be in our elementary schools and not know that technology integration is a key focus." The superintendent "got the ball rolling" and was able to maintain the focus on the initiative at the various levels, but in particular at the school level. His clear vision assisted the board of supervisors in supporting the initiative, of providing students with "daily access" to technology.

In essence, all key players within the school system share a degree of responsibility for the initiative and a common vision from which to work. Administrative and instructional personnel "believe in technology." Furthermore, at the school level, the role of the principal is critical. Principals determine needs, assist teachers and others in having their needs met, and make school level personnel feel part of the initiative. And, these shared visions and efforts at inclusion, lead to a sense of teamwork. Teamwork was mentioned as an integral part of the ECCI's apparent successful implementation in this first year. The team shared the vision, understood the vision, and made the vision happen. Despite the role of planning discussed in the section below, it was emphasized that good people are required to execute plans correctly.

The role of systematic planning? One important factor in the implementation was systematic planning and adequate funding. Specifically, the initiative was not just seen as putting five computers in a classroom (not an easy task, but "A tremendous effort for the school system"), but as developing a plan to change the approach to instruction. This planning involved gaining support at the various levels of the school system and developing time lines for the completion of certain tasks and subtasks. There was no handbook to accomplish the goal, consequently, the plans had to be developed.

It appears that the front-end planning and monetary support provided a good foundation on which to produce a successful implementation. Resources were adequate enough to fund the various aspects of the project. It was noted that the plan was detailed enough to reveal what, in the way of money, would be required for such tasks as training. Good planning was seen as a critical part of the seemingly successful

implementation.

Another critical factor revealed in interviews was clear communication, as represented by: informing personnel of what is happening, why it is happening, when it is happening, how is it happening, and the roles and responsibilities of all the personnel. Such information was conveyed via formal and informal lines of communication across various operational levels of the initiative.

Those responsible for developing the plan to implement the initiative were personnel from: technology, instruction, purchasing, construction & maintenance, staff development, etc. Specifics concerning ECCI's hardware and instruction implementation follow a brief description of the process.

Overview of the Process

Developing the plan of implementation was one of the first steps of the initiative. Several time lines were developed for the project: 1) instruction/integration, 2) workstation software, 3) CAI (computer aided instruction) software, 4) ILS (integrated learning systems) software, classroom workstation, 5) classroom printers, 6) furniture, 7) electrical upgrades, 8) cabling/networking/fileserver, 9) research/evaluation, and 10) staff development training. Each task area for the initiative contained numerous subtasks.

Many of the tasks in this first year were initiated simultaneously while some were phased in as to not overload the various project members and resources of the ECCI. In essence the initiative began by assessing the future locations of the computers (i.e., examining the electrical outlets), preparing the rooms for computer placement (i.e., furniture, layout etc.), selecting hardware, installing hardware, selecting and installing

software, assessing staff training needs, and the training of personnel.

Hardware Implementation

The people involved in hardware (i.e., computer stations and networks, etc.) implementation (and maintenance) were: 1) technology director, 2) networking specialist, 3) networking technicians, and 4) instructional assistants.

There is an instructional assistant (IA) for each school. These assistants provide school level technical support. Ideally, IAs would be Certified Network Administrators (CNA) qualified and be able to handle most technical problems.

There are two certified networking technicians for all the schools. The networking technicians set up and configured the network, and perform trouble shooting. The networking specialist is qualified to handle numerous problems. The technology director is responsible for overseeing the technology portion of the initiative (see the attached for the detailed implementation process).

A **brief description** of the hardware implementation as described by the director of technology follows: 1) bids for computers, 2) furniture for computers, 3) printer bids, 4) electrical upgrades, and 5) cabling, file servers, and networking bids and installation (installation was accomplished by technology staff and construction and maintenance personnel).

A few **"problems", issues, or wishes** as described by the director of technology (i.e., what were some of the "toughest tasks" in the initiative?):

- 1) over 700 classrooms' electrical outlets were examined, many outlets had to be installed or upgraded;

- 2) due to funding considerations one vendor could not be selected to do all cabling etc., therefore numerous vendors were contracted to work on groups of schools;
- 3) prior to installation the construction market changed and consequently elevated the cost;
- 4) one vendors delay and poor workmanship caused some delays;
- 5) increase knowledge level of instructional assistants and certify them for network administration.

Software/Instruction Implementation

The personnel involved in implementing the software/instruction portion of the ECCI were: 1) instruction director, 2) technology trainers or technology instructors, 3) educational specialists, and 4) computer contacts (and 5) grade level representative for technology).

Computer contacts are located at each school. They serve as the first line of contact for teachers with non-technical issues (teachers may also be assisted by their grade level representative). However, in the initial year, most of their assistance has been of a technical nature. They also serve on the school's technology committee.

There is an educational specialist for each subject area (e.g., math, english etc.). The educational specialist assisted in the selection of instructional software.

Technology trainers were assigned the primary tasks to train teachers to operate software and to assist teachers in integrating their instruction with technology.

The director of instruction is responsible for overseeing the instructional software portion of the implementation. (see the attached for the detailed implementation process).

A **brief description** of the software/instruction implementation as described by the director of instruction follows: 1) software needs were determined, 2) software bids made, 3) vendors selected, 4) instructors hired, and 5) training implemented.

A few **"problems", issues, or wishes** as described by the director of instruction and elementary education (i.e., what were some of the "toughest tasks" in the initiative?):

- 1) instructors hired within four weeks of start of training;
- 2) as training being developed, curriculum also being constructed;
- 3) not enough sharing of ideas, techniques among teachers etc.;
- 4) on-going process to increase teacher comfort level of teachers;
- 5) would like to increase number of instructors to seven, to make visit to one school per day all week;
- 6) in order to open lines of communication to teachers about technology: teacher visits to other classrooms (peer observation), written reports about in-class activities, and the development of a tutorial video are a few activities mentioned to address this issue;
- 7) some teachers have expressed a desire to see the "big picture", i.e., know a little more about the technical side of the initiative;
- 8) sixth grade teachers wish to be prepared for the arrival of technology savvy students headed their way (a consequence of the initiative).

Feedback

students

The students seem to enjoy the computers in the classroom. It has, according to some, enhanced the quest for knowledge in students. "Reluctant writers have come alive." "Students are wanting to explore information on their own" a motivation to know more. Students have used the following words to express their feelings about computers in the classroom: "fun, easy, cool, and awesome." Such descriptions capture the essence of the reception of technology by students in the ECCI.

teachers

Teachers have come along way since the beginning of the year, regarding their knowledge of technology. However, there is a desire to continue their education via practice, additional training, and communication with their peers on issues of integration etc. Specifically, there has been feedback about increasing the opportunities for teachers to get together to exchange ideas and brainstorm. Some specific comments attributed to teachers are: desires for increased practice, an increased in the amount of development days, and less structured staff development.

directors and assistant superintendent of instruction

The directors and assistant superintendent are satisfied with what they have been able to accomplish over the last year "This year has far exceeded our expectations (regarding the level of integration)." Although, the implementation was not without some bumps (down time, etc), the overall implementation has been successful and has to some degree already changed they way teachers teach. They believe the success to be

related to the people involved at all levels of the initiative, the front-end planning and funding, and a sense of shared vision.

Conclusions

Surveys

It appears that veteran teachers may have initially had a more difficult time than their less veteran counterparts adjusting to the initiative. This was suggested by more veteran teachers seeing themselves as non-users or beginners regarding computer use. However, gains were seen in all groups, suggesting training and mere exposure has had some impact on teacher's knowledge of computers. It was also interesting to note that a majority of the teachers reported that their undergraduate programs did not offer computer courses. Something that will hopefully change in the future.

The data also suggest that there has been an overall increase in self-perceived computer ability overall. In particular teachers who described some of their computers skills as "self-taught" reported the most gains in computer ability after the first year of the initiative. It appears that training and exposure impact teacher's perceptions of their abilities in a positive manner.

Teachers who reported benefiting from initiative training also tended to report changing their instructional behavior, more so than those who reported less benefits from the initiative training. Feelings of adequate knowledge (through training) may make teachers more willing or feel more comfortable to try new methods of educating pupils and managing the classroom.

Items assessing software instruction training were positive, but not as positive as the responses to overall initiative training. It is possible that the number of programs utilized as part of the initiative is too great. Enhancing teacher confidence in software

training to the level that of the perception of overall initiative training may further impact positive changes in instructional behavior.

Despite reports that software training has assisted them in the development of materials and in classroom administration almost an equal number differed in their opinion in being able to present more complex material to students. Further examination should be given to this finding as additional data is obtained.

Data also suggest that the principal can play a vital role in the initiative but his or her role may need to be better clarified. Some teachers felt they couldn't assess the principal's support role in the initiative, whereas another group felt that support was less than average. It should be noted that most teachers did see the principals' support as average to excellent, but enough were unsure of his or her support role or thought it could be improved or clarified to be a focus of future intervention efforts (i.e., clarifying roles and responsibilities).

Those teachers who saw overall administrative support as adequate also reported that a great deal of their instruction came from fellow teachers. This suggests that a sense of teamness exists amongst the teachers, supported by administration. This teamness was mentioned numerous times during interviews of critical initiative personnel as well.

The most consistently reported barrier to the initiative was a lack of teacher planning time. Planning time could be utilized to perform of tasks (e.g., integration) and "perfect" a variety of computer and software skills.

Interviews

After reviewing the implementation of the ECCEI, several factors seemed to have

played a critical role: Planning, Funding, and Teamwork. Without these factors, the implementation could have been a lot more difficult and a lot less successful. But, it is worth noting that, teamwork is a critical factor in such projects and has and is making the initiative progress along nicely.

Members of the school system at numerous levels have bought into the technology initiative. At every level, the leadership has demonstrated support of the technology vision and shared this vision and support with their subordinates. At the school level, the principal's support is paramount. Staff and teachers must feel that their efforts are useful and appreciated; it appears that this is the case.

This teamwork has allowed any problems to be solved before they become too huge and a "will make it work somehow" attitude. Some other factors worth mentioning would include: the enthusiasm of the children was motivating and helped to maintain focus on the goal, the school systems desire to be a "technological leader" , keeping personnel informed with clear communication, and providing a comfortable training ground for teachers. Finally, during interviews it appeared that the easiest part of the initiative was "buying into the project" and the most difficult part of the initiative was the psychological pressure of meeting the deadlines of such a massive project.

Next steps

Ironing out network problems is the next step for the technology group, there has been some minor glitches with the hardware. For the software/instruction side, there will be more acquisitions of software as well as ILS software for the network. Also, continuing education of teachers concerning technology and integration is a primary goal. The goal is to get the teacher's comfort level up as soon as possible.

One long range issue expressed by some during the interviews dealt with staying technologically current. With the expenditure of time and expense put into the initiative there is a desire that the tools obtained for education will be relevant into the future.

Recommendations

1. Increase comfort level of teachers
 - a. Increase exposure to computers and opportunity to practice and share information
 - b. Pay particular attention to veteran teachers' concerns (evidence suggests that veteran teachers' lack of confidence in dealing with computers could be a hindrance toward optimizing the use of computers in the classroom)
2. Focus efforts on getting teachers to take chances to try new approaches
Continual staff development which emphasizes confidence as well as content (make them feel good about using technology)
3. Determine additional methods to train teachers on software
Assess if the amount of software required to learn is too much and is deflating teacher confidence in software training
4. Focus research and training efforts on using computers to present more complex material to students
Teachers share ideas
5. Clarify the principal's support role in the initiative at the school level
6. Build on the team spirit that exists among teachers
 - a. Gather teachers together for regular meetings
 - b. Exchange reports on technology's use in instruction

7. Focus on discovering ways to provide teachers with planning time
8. Increase knowledge of instructional assistants, have them certified for network administration
9. Make sure the big picture is being communicated to teachers
10. Increase the number of technology instructors.

Reference

Becker, H. J. (1990, October). Computer-based integrated learning systems in the elementary and middle grades: A critical review and synthesis of evaluation reports. Baltimore, MD: Johns Hopkins University, Center for Social Organization of Schools.

Appendix:

selected teacher demographics
copy of survey
primary interview questions
response frequency of survey items
variances explained
crosstabulations
correlations of sections 1 through 5
data collection procedures: data for year 1
selected research questions: the 1st year
implementation of the computer initiative

Frequencies: Selected Teacher Demographics

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	7	7.1	7.1	7.1
	female	91	92.9	92.9	100.0
	Total	98	100.0	100.0	
Total		98	100.0		

ethnic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	caucasian	89	90.8	90.8	90.8
	african-american	8	8.2	8.2	99.0
	other	1	1.0	1.0	100.0
	Total	98	100.0	100.0	
Total		98	100.0		

degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	education	74	75.5	75.5	75.5
	liberal arts	8	8.2	8.2	83.7
	psychology	6	6.1	6.1	89.8
	science	1	1.0	1.0	90.8
	other	9	9.2	9.2	100.0
	Total	98	100.0	100.0	
Total		98	100.0		

yearstch

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less_two	8	8.2	8.2	8.2
	3to5	13	13.3	13.3	21.4
	6to9	19	19.4	19.4	40.8
	10to13	9	9.2	9.2	50.0
	14_more	49	50.0	50.0	100.0
	Total	98	100.0	100.0	
Total		98	100.0		

Survey Responses: Year 1

Section 1. Teacher Background, Teacher Experience, Support, and Training

1.	Gender		
	A.	male	7.1%
	B.	female	92.9%
2.	Ethnic Group		
	A.	Caucasian	90.8%
	B.	African/American	8.2%
	C.	Asian	0%
	D.	Hispanic	0%
	E.	Other: _____	1.0%
3.	Undergraduate major degree in		
	A.	education	75.5%
	B.	liberal arts	8.2%
	C.	psychology	6.1%
	D.	science	1%
	E.	other: _____	9.2%
4.	Number of years teaching		
	A.	Less than 2 years	8.2%
	B.	3 -5	13.3%
	C.	6 -9	19.4%
	D.	10 -13	9.2%
	E.	14+	50%
5.	Computer at Home for Personal Use		
	A.	Yes	73.5%
	B.	No	26.5%
6.	Number of Years you have Used Computers in Teaching		
	A.	Less than 2 years	30.6%
	B.	3 -5	41.8%
	C.	6 -9	20.4%
	D.	10 -13	5.1%
	E.	14+	2%
7.	Do you teach a multi-age class?		
	A.	yes	5.1%
	B.	no	94.9%
8.	What is the lowest grade you teach?		
	A.	first	32.7%
	B.	second	15.3%
	C.	third	21.4%
	D.	fourth	19.4%
	E.	fifth.	11.2%

Note. The following percentages may not total to 100% due to rounding error

Survey Responses: Year 1

Section 2. Questions 9 through 18 deal with How/Where Were You Trained in Computer Use.

Personal Training Etc

- | | | |
|-----|---|-------|
| 9. | Self-taught | 52% |
| | A. yes | 48% |
| | B. no | |
| 10. | Conferences and workshops (on own time) | |
| | A. yes | 74.5% |
| | B. no | 25.5% |
| 11. | Courses at local colleges
(e.g., J. Sargeant Reynolds) | |
| | A. yes | 15.3% |
| | B. no | 84.7% |
| 12. | Courses in preparation for degree
major grad/undergraduate | |
| | A. yes | 18.4% |
| | B. no | 81.6% |

School Training Etc

- | | | |
|-----|---|-------|
| 13. | Courses offered by district (SCC) | |
| | A. yes | 82.7% |
| | B. no | 17.3% |
| 14. | Courses offered at school (in-service) | |
| | A. yes | 95.9% |
| | B. no | 4.1% |
| 15. | Training offered by school district
(Five days of training) | |
| | A. yes | 98% |
| | B. no | 2% |
| 16. | Instruction from other teachers | |
| | A. yes | 92.9% |
| | B. no | 7.1% |
| 17. | Instruction on site by technology
instructor | |
| | A. yes | 93.9% |
| | B. no | 6.1% |
| 18. | My training days in the initiative began: | |
| | A. During the school year prior to the
installation of the hardware
and software. | 39.6% |
| | B. During the school year after the
installation of the hardware
and software. | 22.9% |
| | C. During the summer. | 37.5% |

Survey Responses: Year 1

For items 19 through 23 fill in the response that best reflects your level of agreement with the item, using the response modes below:

- A = "Strongly Agree"
 B = "Agree"
 C = "Disagree"
 D = "Strongly Disagree"

	SA (A)	A (B)	D (C)	SD (D)
19. I benefited greatly from the initiative training.	56.3%	38.5%	4.2%	1%
20. I would have benefited more from training dates spaced further apart.	9.4%	30.2%	43.8%	15.6%
21. The level of instruction in the computer training was appropriate for my knowledge level.	39.6%	46.9%	10.4%	3.1%
→ 22. My training on curriculum content software was adequate.	7.3%	53.1%	33.3%	5.2%
→ 23. My training on the software to assist with the development of materials and the administration of the classroom met my needs.	6.3%	54.2%	33.3%	5.2%

Section 3. Questions 24 through 29 deal with rating the support you receive from various sources.

(Rate: "A"=excellent support to "D"=no support, and "E"=don't know) For the items below indicate the amount of support received.

- (A)= excellent support (there when you need it / proactive)
 (B)= average support (there when you ask for it / reactive)
 (C)= less than average support (not there when needed or asked)
 (D)= no support
 (E)= don't know

	A	B	C	D	E
24. Other teachers (day to day)	58.2%	38.8%	1%	2%	0%
25. School computer contact	42.9%	46.9%	6.1%	3.1%	1%
26. School technology committee representative	39.2%	37.1%	8.2%	5.2%	10.3%
27. Technology instructors	36.7%	51%	7.1%	0%	5.1%
28. Computer instructional assistant	40.8%	38.8%	15.3%	1%	4.1%
→ 29. Principal	29.6%	30.6%	9.2%	16.3%	14.3%

Survey Responses: Year 1

Compared with your expectations for the first year of the initiative, please answer the following questions.

- | | | |
|-----|--|-------|
| 30. | Have you received adequate technical support | |
| | A. yes | 74.5% |
| | B. no | 24.5% |
| 31. | Have you received adequate instructional training support | |
| | A. yes | 74.5% |
| | B. no | 22.4% |
| 32. | Have you received adequate overall/administrative support | |
| | A. yes | 86.7% |
| | B. no | 11.2% |
| 33. | Which statement best describes your level of computer expertise <u>BEFORE The Computer Initiative?</u> | |
| | A. non-user | 6.2% |
| | B. I can only perform simple tasks on the computer and with some difficulty | 22.7% |
| | C. I can perform basic computer tasks, e.g., word processing, quite well, although I might not know or utilize the full potential of the program | 55.7% |
| | D. I can perform numerous tasks on the computer, e.g.,: word processing, graphics, information management etc. quite well and am familiar with the software's capabilities | 11.3% |
| | E. I know a great deal about computer hardware, software, and use -- and can perform many tasks with a variety of software | 4.1% |

Survey Responses: Year 1

34. Which statement best describes your level of Computer Expertise TODAY?

- | | | |
|----|--|-------|
| A. | non-user | 0% |
| B. | I can only perform simple tasks on the computer and with some difficulty | 3.1% |
| C. | I can perform basic computer tasks, e.g., word processing, quite well, although I might not know or utilize the full potential of the program | 30.9% |
| D. | I can perform numerous tasks on the computer, e.g., word processing, graphics, information management etc. quite well and am familiar with the software's capabilities | 43.3% |
| E. | I know a great deal about computer hardware, software, and use -- and can perform many tasks with a variety of software | 22.7% |

Teaching Practices

Section 4. Why do you use it?

Questions 35 through 37 deal with the **Goals of Most of your Computer Work** and you are to select one choice only for each item. What do you use computers for in your classroom? What is your first goal, your second, and your third goal concerning computer use in the classroom?

- | | | |
|-----|---------------------------|-------|
| 35. | Reinforce core curriculum | |
| | A. primary goal | 56.1% |
| | B. moderate goal | 38.8% |
| | C. least primary goal | 5.1% |
| 36. | Extend core curriculum | |
| | A. primary goal | 40.8% |
| | B. moderate goal | 52% |
| | C. least primary goal | 7.1% |
| 37. | Remediate core curriculum | |
| | A. primary goal | 10.2% |
| | B. moderate goal | 23.5% |
| | C. least primary goal | 66.3% |

Survey Responses: Year 1

Section 5. Objectives for Computer Use

Questions 38 through 53 deal with the rated objectives for computer use in the classroom.

For the items below Rate the degree that each item is an objective of computer use in your classroom. For example, if an item is a moderate objective fill in "B" on the response sheet in the space provided. For example,:

Entertainment (if this is not an objective it would be marked as "D" on the response sheet, use this response mode for rating items 38-53 below).

- A. primary objective
- B. moderate objective
- C. low objective
- D. not an objective

	A	B	C	D
Subject areas				
38. Mastering math skills	27.6%	44.9%	22.4%	5.1%
39. Learning to apply math	27.6%	45.9%	21.4%	5.1%
40. Improving language arts skills	61.2%	34.7%	4.1%	0%
41. Improving reading skills	39.2%	43.3%	15.5%	2.1%
42. Improving writing skills	84.7%	11.2%	2%	2%
43. Understanding social studies	8.2%	35.7%	41.8%	14.3%
44. Understanding science	7.1%	36.7%	42.9%	13.3%
General areas				
45. Remediating deficiencies	14.3%	45.9%	30.6%	9.2%
46. Motivating interest	68.4%	26.5%	4.1%	1%
47. Rewarding completed work	15.3%	22.4%	34.7%	27.6%
48. Challenging high ability students	60.2%	36.7%	3.1%	0%
Learning and skill areas				
49. Teaching about computers	44.9%	42.9%	11.2%	1%
50. Higher order thinking skills	36.7%	45.9%	14.3%	3.1%
51. Student directed learning	39.8%	52%	5.1%	3.1%
52. Improving cooperative learning	27.6%	50%	18.4%	4.1%
53. Improving problem solving	39.8%	45.9%	12.2%	2%

Survey Responses: Year 1

Section 6. Since I have been using computers in my classrooms how has my teaching changed?

For the items 54 - 63 below, indicate the degree to which you agree or disagree with the statement. The response mode for the scoring sheet is as follows:

A = "Strongly Agree"
 B = "Agree"
 C = "Disagree"
 D = "Strongly Disagree"

	SA (A)	A (B)	D (C)	SD (D)
General areas				
54. I can expect more from my students in terms of their pursuing and editing their work.	47.4%	45.4%	5.2%	2.1%
55. I am more comfortable with students working independently.	43.3%	50.5%	6.2%	0%
56. I am more comfortable with small group activities.	28.6%	57.1%	13.3%	1%
Class time				
57. I spend more time with individual students.	21.9%	51%	26%	1%
58. I spend less time lecturing to the entire class.	24.7%	50.5%	23.7%	1%
59. I spend less time with the whole class practicing or reviewing material.	18.8%	42.7%	35.4%	3.1%
Teaching style				
60. I am better able to present more complex material to my students.	15.5%	34%	42.3%	8.2%
61. I am better able to tailor instruction to the individual needs of students.	21.6%	53.6%	20.6%	4.1%
62. I utilize thematic approach across subject areas more.	30.9%	35.1%	32%	2.1%
63. I discuss technology, ideas, and resources with other teachers.	46.4%	50.5%	3.1%	0%

Survey Responses: Year 1

Section 7. Overall Perceptions

Administrative Support

For items 64 through 68 fill in the response that best reflects your level of agreement with the item, using the response modes below:

- A = "Strongly Agree"
 B = "Agree"
 C = "Disagree"
 D = "Strongly Disagree"

	SA (A)	A (B)	D (C)	SD (D)
64. The technology in-service workshops provided by the school are helpful.	36.7%	54.1%	8.2%	1%
65. The elementary specialists provide technology related workshops that are helpful for technology integration.	18.6%	53.6%	22.7%	5.2%
66. Fellow teachers provide a good source of support.	54.1%	40.8%	4.1%	1%
67. Building level support is adequate.	27.6%	59.2%	13.3%	0%
68. Computer problems are handled in a timely manner.	22.4%	58.2%	12.2%	7.1%

Attitudes

For items 69 through 75 fill in the response that best reflects your level of agreement with the item, using the response modes below:

- A = "Strongly Agree"
 B = "Agree"
 C = "Disagree"
 D = "Strongly Disagree"

	SA (A)	A (B)	D (C)	SD (D)
69. I enjoy working with my students on the computers.	62.2%	33.7%	2%	2%
70. The computer initiative has increased my interest in and knowledge about technology.	67%	32%	0%	1%
71. I consider technology as being very important to my work as a classroom teacher.	53.1%	38.8%	7.1%	1.0%

Survey Responses: Year 1

	SA (A)	A (B)	D (C)	SD (D)
72. I would still remain a teacher in a technology classroom if I had it to do all over again.	60.2%	36.7%	2%	1%
A = "Strongly Agree" B = "Agree" C = "Disagree" D = "Strongly Disagree"				
	SA (A)	A (B)	D (C)	SD (D)
73. Education reform in the district has been enhanced by the introduction of technology.	51%	39.8%	8.2%	1%
74. My students seem to like school more this year.	35.1%	39.4%	22.3%	2.1%
75. Students seem to think of computers as a helpful tool in the attainment of their learning goals.	37.1%	45.4%	15.5%	2.1%

Motivation

For items 76 through 79 fill in the response that best reflects your level of agreement with the item, using the response modes below:

A = "Strongly Agree"
B = "Agree"
C = "Disagree"
D = "Strongly Disagree"

	SA (A)	A (B)	D (C)	SD (D)
76. There is an increase in the motivation of students to read.	34.4%	39.6%	21.9%	4.2%
77. There is an increase in motivation of students to write.	55.1%	40.8%	3.1%	1%
78. There is an increased interest in learning.	36.1%	42.3%	20.6%	1%
79. Technology has helped my students to become more motivated and enthusiastic about their school work.	38.1%	40.2%	19.6%	2.1%

Survey Responses: Year 1

Technology Use

For items 80 through 82 fill in the response that best reflects your level of agreement with the item, using the response modes below:

A = "Strongly Agree"

B = "Agree"

C = "Disagree"

D = "Strongly Disagree"

	SA (A)	A (B)	D (C)	SD (D)
80. My use of technology in my work with students increases as I become more familiar with its potential.	58.2%	38.8%	3.1%	0%
81. The computer initiative allows me to manage my classroom instruction.	15.5%	48.5%	32%	4.1%
82. The computer initiative has been helpful to me in managing grades, communication, and student information.	25.5%	44.9%	27.6%	2%

Instructional Behavior

For items 83 through 88 fill in the response that best reflects your level of agreement with the item, using the response modes below:

	SA (A)	A (B)	D (C)	SD (D)
83. The computer initiative has encouraged me to plan cooperatively with other staff.	15.5%	46.4%	37.1%	1%
84. As I plan for the subject matter to be presented in a lesson, I also plan how technology can be used to implement the unit.	25.5%	63.3%	10.2%	1%
85. Technology has created greater opportunities for me to plan the instructional program for my students.	17.3%	63.3%	17.3%	2%
86. Technology has changed my approach to classroom management and instruction.	24.7%	51.5%	20.6%	3.1%
87. There should be more integration of technology into the curriculum.	28.9%	47.4%	19.6%	4.1%

Survey Responses: Year 1

88. Technology integration has allowed students to become more self-reliant. 26% 56.3% 15.6% 2.1%

Support

For items 89 through 91 fill in the response that best reflects your level of agreement with the item, using the response modes below:

		SA (A)	A (B)	D (C)	SD (D)
89.	The staff development programs related to technology have met my needs.	15.5%	50.5%	30.9%	3.1%
90.	I feel I have adequate support from administration.	26.8%	66%	5.2%	2.1%
91.	My perception is that parents are supportive of technology in the classroom.	54.6%	42.3%	3.1%	0%

Performance:

For items 92 through 107 fill in the response that best reflects your level of agreement with the item, using the response modes below:

		SA (A)	A (B)	D (C)	SD (D)
92.	My high-achieving students have profited from the computer initiative.	66.3%	32.7%	1%	0%
93.	My average-achieving students have profited from the computer initiative.	50%	49%	1%	0%
94.	My low-achieving students have profited from the computer initiative.	46.9%	43.9%	7.1%	2%
95.	Attendance of students has improved because technology was introduced.	5.5%	12.1%	60.4%	20.9%
96.	The students' skills have improved in reading.	20%	53.7%	24.2%	2.1%
97.	The students' skills have improved in writing.	38.8%	57.1%	3.1%	1%
98.	Students have generally improved in their overall confidence toward their school work.	18.8%	57.3%	21.9%	2.1%
99.	Students have increased their interest in technology.	60.2%	38.8%	1%	0%

Survey Responses: Year 1

	SA (A)	A (B)	D (C)	SD (D)
100. Students have improved in their completion of class assignments.	8.2%	47.4%	39.2%	5.2%
101. Students have improved in their completion of homework assignments.	4.1%	11.3%	61.9%	21.6%
102. Students have improved in problem solving and higher order thinking skills.	7.3%	61.5%	28.1%	3.1%
103. Discipline problems in my classroom have decreased since I began using technology in my teaching.	6.4%	23.4%	60.6%	9.6%
104. There is an improved student/teacher rapport.	8.6%	54.8%	30.1%	6.5%
105. The grades of my students have improved because technology was introduced.	4.3%	40.4%	51.1%	4.3%
106. Technology has had a positive effect upon the learning of my students.	38.8%	55.1%	4.1%	2%
107. Students have increased their participation in class activities.	23.7%	50.5%	23.7%	2.2%

Survey Responses: Year 1

Section 8A. Examines the CURRENT barriers to most effectively using the initiative classroom computers.

Questions 108 through 129 asks you to rank your perceptions of the impact of barriers to using the computers effectively. The barriers are grouped into three categories: Instructional delivery, hardware, and overall/administrative. You are to rank the items below, using each rating only once.

(Look over all the items in the category and then rank them. Rank: "A"=most difficult barrier to "E"=least difficult barrier)

Instructional Delivery

- A. most difficult barrier
- B. more than moderately difficult barrier
- C. moderately difficult barrier
- D. less than moderately difficult barrier
- E. least difficult barrier

	A	B	C	D	E
108. Not enough time to develop lessons that use computers	40.2%	27.6%	24.1%	4.6%	3.4%
109. Not enough help for supervising student computer use.	19.5%	21.8%	29.9%	13.8%	14.9%
110. Not enough training to fully integrate software	14.9%	18.4%	32.2%	27.6%	6.9%
111. My knowledge of computers is still too weak to use them effectively.	4.6%	6.9%	13.8%	29.9%	44.8%
112. Lack of appropriate software.	18.4%	14.9%	17.2%	28.7%	20.7%

Survey Responses: Year 1

Section 8B. Examines the CURRENT barriers to most effectively using the initiative classroom computers.

(Look over all the items in the category and then rank them. Rank: "A"=most difficult barrier to "E"=least difficult barrier)

Hardware

- A. most difficult
- B. more than moderately difficult
- C. moderately difficult
- D. less than moderately difficult
- E. least difficult

		Responses				
		A	B	C	D	E
113.	Computers need to be repaired too frequently.	5.9%	23.5%	32.9%	27.1%	10.6%
114.	Frequent problems with printers.	38.8%	23.5%	22.4%	7.1%	8.2%
115.	The network is down too often.	9.5%	14.3%	25%	32.1%	19%
116.	I don't understand the technical side of the initiative.	24.7%	11.8%	20%	12.9%	30.6%
117.	Response to computer repair is too long.	7.1%	20%	20%	24.7%	28.2%

Section 8C. Examines the PAST barriers to most effectively using the initiative classroom computers.

(Look over all the items in the category and then rank them. Rank: "A"=most difficult barrier to "E"=least difficult barrier)

Overall/Administrative

- A. most difficult in the past
- B. more than moderately difficult in the past
- C. moderately difficult in the past
- D. less than moderately difficult in the past
- E. least difficult in the past

118.	Not enough time in the school schedule for more computer-based instruction.	20.7%	18.3%	23.2%	23.2%	14.6%
119.	Not enough software available.	17.1%	34.1%	30.5%	13.4%	4.9%
120.	Not enough hardware available.	29.3%	25.6%	19.5%	17.1%	8.5%
121.	Not enough planning time.	31.7%	25.6%	22%	13.4%	7.3%
122.	Lack of building level leadership.	1.2%	12.2%	15.9%	13.4%	57.3%

Survey Responses: Year 1

Section 8D. Examines the CURRENT barriers to most effectively using the initiative classroom computers.

(Look over all the items in the category and then rank them. Rank: "A"=most difficult barrier to "E"=least difficult barrier)

Overall/Administrative

- A. most difficult now
- B. more than moderately difficult now
- C. moderately difficult now
- D. less than moderately difficult now
- E. least difficult now

	A	B	C	D	E
123. Not enough time in the school schedule for more computer-based instruction.	28.9%	27.7%	19.3%	15.7%	8.4%
124. Not enough software available.	13.1%	22.6%	35.7%	15.5%	13.1%
125. Not enough hardware available.	4.8%	8.3%	19%	34.5%	33.3%
126. Not enough planning time.	56%	21.4%	10.7%	8.3%	3.6%
127. Lack of building level leadership.	2.4%	6%	8.3%	25%	58.3%

Approximate Variances Explained

Teacher Background:

Correlations

Q4 explains	14% of the variance in Q9	.377
	26% of the variance in Q12	.482
	16% of the variance in Q33	-.394
	14% of the variance in Q34	-.342

Teacher Computer Ability:

Q9 explains	23% of the variance in Q33	-.481
	14% of the variance in Q34	-.367

Planning Instructional Programs:

Q19 explains	15% of the variance in Q85	.257
	14% of the variance in Q86	.230
	19% of the variance in Q88	.314

Instructional Delivery:

Q22 explains	17% of the variance in Q81	.354
	15% of the variance in Q84	.358

Development of Materials:

Q23 explains	16% of the variance in Q60	.384
	23% of the variance in Q81	.451
	18% of the variance in Q82	.379
	14% of the variance in Q84	.344
	16% of the variance in Q85	.336
	14% of the variance in Q88	.363

Initiative Support:

Q25 explains	15% of the variance in Q89	.241
Q27 explains	20% of the variance in Q90	.243
Q28 explains	22% of the variance in Q90	.194 (nearly significant)
Q29 explains	43% of the variance in Q90	.480
Q32 explains	14% of the variance in Q16	.206

Complete items are presented on the following pages. The F's for these items have p values equal to or less than .05. These explained variances represent an estimate of variance in one item explained by variance in another item utilizing eta squared. Eta squared is interpreted as the proportion of total variability in the dependent variable that is accounted for by the variation in the independent variable. The items in the left column represent independent variables while items in the right column represent dependent variables.

Note the following: An asterisk (*Q#) represent items that explain items that follow it. The Q#s represent the item number in the survey and are used in the cross tabulations in order to save space. Additionally, the response modes for the items are also presented. Note that "SA = strongly agree, A = agree, D = disagree, and SD = strongly disagree." The numbers associated with the response modes are those employed in the actual cross tabulations. Data for the following sections are presented:

Teacher Background
Teacher Computer Ability
Planning Instructional Programs
Instructional Delivery
Development of Material
Initiative Support

Crosstabs: Teacher Background

Q9 * Q4 Crosstabulation

			Q4					Total
			1	2	3	4	5	
Q9	1	Count	7	10	12	5	17	51
		% of Q9	13.7%	19.6%	23.5%	9.8%	33.3%	100.0%
		% of Q4	87.5%	76.9%	63.2%	55.6%	34.7%	52.0%
		% of Total	7.1%	10.2%	12.2%	5.1%	17.3%	52.0%
	2	Count	1	3	7	4	32	47
		% of Q9	2.1%	6.4%	14.9%	8.5%	68.1%	100.0%
		% of Q4	12.5%	23.1%	36.8%	44.4%	65.3%	48.0%
		% of Total	1.0%	3.1%	7.1%	4.1%	32.7%	48.0%
Total		Count	8	13	19	9	49	98
		% of Q9	8.2%	13.3%	19.4%	9.2%	50.0%	100.0%
		% of Q4	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	8.2%	13.3%	19.4%	9.2%	50.0%	100.0%

Q12 * Q4 Crosstabulation

			Q4					Total
			1	2	3	4	5	
Q12	1	Count	5	4	7	1	1	18
		% of Q12	27.8%	22.2%	38.9%	5.6%	5.6%	100.0%
		% of Q4	62.5%	30.8%	36.8%	11.1%	2.0%	18.4%
		% of Total	5.1%	4.1%	7.1%	1.0%	1.0%	18.4%
	2	Count	3	9	12	8	48	80
		% of Q12	3.8%	11.3%	15.0%	10.0%	60.0%	100.0%
		% of Q4	37.5%	69.2%	63.2%	88.9%	98.0%	81.6%
		% of Total	3.1%	9.2%	12.2%	8.2%	49.0%	81.6%
Total		Count	8	13	19	9	49	98
		% of Q12	8.2%	13.3%	19.4%	9.2%	50.0%	100.0%
		% of Q4	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	8.2%	13.3%	19.4%	9.2%	50.0%	100.0%

*Q4 4. Number of years teaching
 (1)A. Less than 2 years
 (2)B. 3 - 5
 (3)C. 6 - 9
 (4)D. 10 - 13
 (5)E. 14+

Q9 9. Self-taught
 (1)A. yes
 (2)B. no

Q12 12. Courses in preparation for degree major grad/undergraduate
 (1)A. yes
 (2)B. no

Q33 * Q4 Crosstabulation

			Q4					Total
			1	2	3	4	5	
Q33	1	Count			1		5	6
		% of Q33			16.7%		83.3%	100.0%
		% of Q4			5.3%		10.4%	6.2%
		% of Total			1.0%		5.2%	6.2%
	2	Count		2	3	2	15	22
		% of Q33		9.1%	13.6%	9.1%	68.2%	100.0%
		% of Q4		15.4%	15.8%	22.2%	31.3%	22.7%
		% of Total		2.1%	3.1%	2.1%	15.5%	22.7%
	3	Count	5	7	12	5	25	54
		% of Q33	9.3%	13.0%	22.2%	9.3%	46.3%	100.0%
		% of Q4	62.5%	53.8%	63.2%	55.6%	52.1%	55.7%
		% of Total	5.2%	7.2%	12.4%	5.2%	25.8%	55.7%
	4	Count	1	3	2	2	3	11
		% of Q33	9.1%	27.3%	18.2%	18.2%	27.3%	100.0%
		% of Q4	12.5%	23.1%	10.5%	22.2%	6.3%	11.3%
% of Total		1.0%	3.1%	2.1%	2.1%	3.1%	11.3%	
5	Count	2	1	1			4	
	% of Q33	50.0%	25.0%	25.0%			100.0%	
	% of Q4	25.0%	7.7%	5.3%			4.1%	
	% of Total	2.1%	1.0%	1.0%			4.1%	
Total	Count	8	13	19	9	48	97	
	% of Q33	8.2%	13.4%	19.6%	9.3%	49.5%	100.0%	
	% of Q4	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	8.2%	13.4%	19.6%	9.3%	49.5%	100.0%	

*Q4 4. Number of years teaching
 (1)A. Less than 2 years
 (2)B. 3 - 5
 (3)C. 6 - 9
 (4)D. 10 - 13
 (5)E. 14+

Q33 33. Which statement best describes your level of computer expertise **BEFORE The Computer Initiative?**
 (1)A. non-user
 (2)B. I can only perform simple tasks on the computer and with some difficulty
 (3)C. I can perform basic computer tasks, e.g., word processing, quite well, although I might not know or utilize the full potential of the program
 (4)D. I can perform numerous tasks on the computer, e.g., word processing, graphics, information management etc. quite well and am familiar with the software's capabilities
 (5)E. I know a great deal about computer hardware, software, and use – and can perform many tasks with a variety of software

Q34 * Q4 Crosstabulation

			Q4					Total
			1	2	3	4	5	
Q34	2	Count					3	3
		% of Q34					100.0%	100.0%
		% of Q4					6.1%	3.1%
		% of Total					3.1%	3.1%
	3	Count		1	4	2	23	30
		% of Q34		3.3%	13.3%	6.7%	76.7%	100.0%
		% of Q4		8.3%	21.1%	22.2%	46.9%	30.9%
		% of Total		1.0%	4.1%	2.1%	23.7%	30.9%
	4	Count	5	8	11	3	15	42
		% of Q34	11.9%	19.0%	26.2%	7.1%	35.7%	100.0%
		% of Q4	62.5%	66.7%	57.9%	33.3%	30.6%	43.3%
		% of Total	5.2%	8.2%	11.3%	3.1%	15.5%	43.3%
	5	Count	3	3	4	4	8	22
		% of Q34	13.6%	13.6%	18.2%	18.2%	36.4%	100.0%
		% of Q4	37.5%	25.0%	21.1%	44.4%	16.3%	22.7%
		% of Total	3.1%	3.1%	4.1%	4.1%	8.2%	22.7%
Total		Count	8	12	19	9	49	97
		% of Q34	8.2%	12.4%	19.6%	9.3%	50.5%	100.0%
		% of Q4	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	8.2%	12.4%	19.6%	9.3%	50.5%	100.0%

- *Q4 4. Number of years teaching
- (1)A. Less than 2 years
 - (2)B. 3 - 5
 - (3)C. 6 - 9
 - (4)D. 10 - 13
 - (5)E. 14+

- Q34 34. Which statement best describes your level of **Computer Expertise TODAY?**
- (1)A. non-user
 - (2)B. I can only perform simple tasks on the computer and with some difficulty
 - (3)C. I can perform basic computer tasks, e.g., word processing, quite well, although I might not know or utilize the full potential of the program
 - (4)D. I can perform numerous tasks on the computer, e.g., word processing, graphics, information management etc. quite well and am familiar with the software's capabilities
 - (5)E. I know a great deal about computer hardware, software, and use -- and can perform many tasks with a variety of software

Crosstabs: Teacher Computer Ability

Q33 * Q9 Crosstabulation

			Q9		Total
			1	2	
Q33	1	Count		6	6
		% of Q33		100.0%	100.0%
		% of Q9		13.0%	6.2%
		% of Total		6.2%	6.2%
	2	Count	5	17	22
		% of Q33	22.7%	77.3%	100.0%
		% of Q9	9.8%	37.0%	22.7%
		% of Total	5.2%	17.5%	22.7%
	3	Count	33	21	54
		% of Q33	61.1%	38.9%	100.0%
		% of Q9	64.7%	45.7%	55.7%
		% of Total	34.0%	21.6%	55.7%
	4	Count	9	2	11
		% of Q33	81.8%	18.2%	100.0%
		% of Q9	17.6%	4.3%	11.3%
		% of Total	9.3%	2.1%	11.3%
	5	Count	4		4
		% of Q33	100.0%		100.0%
		% of Q9	7.8%		4.1%
		% of Total	4.1%		4.1%
Total	Count	51	46	97	
	% of Q33	52.6%	47.4%	100.0%	
	% of Q9	100.0%	100.0%	100.0%	
	% of Total	52.6%	47.4%	100.0%	

*Q9 9. Self-taught
 (1)A. yes
 (2)B. no

Q33 33. Which statement best describes your level of computer expertise **BEFORE The Computer Initiative?**

(1)A. non-user

(2)B. I can only perform simple tasks on the computer and with some difficulty

(3)C. I can perform basic computer tasks, e.g., word processing, quite well, although I might not know or utilize the full potential of the program

(4)D. I can perform numerous tasks on the computer, e.g., word processing, graphics, information management etc. quite well and am familiar with the software's capabilities

(5)E. I know a great deal about computer hardware, software, and use – and can perform many tasks with a variety of software

Q34 * Q9 Crosstabulation

		Q9		Total	
		1	2		
Q34	2	Count		3	3
		% of Q34		100.0%	100.0%
		% of Q9		6.4%	3.1%
		% of Total		3.1%	3.1%
3		Count	9	21	30
		% of Q34	30.0%	70.0%	100.0%
		% of Q9	18.0%	44.7%	30.9%
		% of Total	9.3%	21.6%	30.9%
4		Count	25	17	42
		% of Q34	59.5%	40.5%	100.0%
		% of Q9	50.0%	36.2%	43.3%
		% of Total	25.8%	17.5%	43.3%
5		Count	16	6	22
		% of Q34	72.7%	27.3%	100.0%
		% of Q9	32.0%	12.8%	22.7%
		% of Total	16.5%	6.2%	22.7%
Total		Count	50	47	97
		% of Q34	51.5%	48.5%	100.0%
		% of Q9	100.0%	100.0%	100.0%
		% of Total	51.5%	48.5%	100.0%

*Q9 9. Self-taught
 (1)A. yes
 (2)B. no

- Q34 34. Which statement best describes your level of **Computer Expertise TODAY?**
- (1)A. non-user
 - (2)B. I can only perform simple tasks on the computer and with some difficulty
 - (3)C. I can perform basic computer tasks, e.g., word processing, quite well, although I might not know or utilize the full potential of the program
 - (4)D. I can perform numerous tasks on the computer, e.g., word processing, graphics, information management etc. quite well and am familiar with the software's capabilities
 - (5)E. I know a great deal about computer hardware, software, and use – and can perform many tasks with a variety of software

Crosstabs: Planning Instructional Programs

Q85 * Q19 Crosstabulation

			Q19				Total
			1	2	3	4	
Q85	1	Count	14	2		1	17
		% of Q85	82.4%	11.8%		5.9%	100.0%
		% of Q19	25.9%	5.4%		100.0%	17.7%
		% of Total	14.6%	2.1%		1.0%	17.7%
	2	Count	35	25	2		62
		% of Q85	56.5%	40.3%	3.2%		100.0%
		% of Q19	64.8%	67.6%	50.0%		64.6%
		% of Total	36.5%	26.0%	2.1%		64.6%
	3	Count	5	8	2		15
		% of Q85	33.3%	53.3%	13.3%		100.0%
		% of Q19	9.3%	21.6%	50.0%		15.6%
		% of Total	5.2%	8.3%	2.1%		15.6%
	4	Count		2			2
		% of Q85		100.0%			100.0%
		% of Q19		5.4%			2.1%
		% of Total		2.1%			2.1%
Total		Count	54	37	4	1	96
		% of Q85	56.3%	38.5%	4.2%	1.0%	100.0%
		% of Q19	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	56.3%	38.5%	4.2%	1.0%	100.0%

			SA (A)	A (B)	D (C)	SD (D)
*Q19	19.	I benefited greatly from the initiative training.	1	2	3	4
Q85	85.	Technology has created greater opportunities for me to plan the instructional program for my students.	1	2	3	4

Q86 * Q19 Crosstabulation

			Q19				Total
			1	2	3	4	
Q86	1	Count	18	5		1	24
		% of Q86	75.0%	20.8%		4.2%	100.0%
		% of Q19	34.0%	13.5%		100.0%	25.3%
		% of Total	18.9%	5.3%		1.1%	25.3%
	2	Count	28	18	3		49
		% of Q86	57.1%	36.7%	6.1%		100.0%
		% of Q19	52.8%	48.6%	75.0%		51.6%
		% of Total	29.5%	18.9%	3.2%		51.6%
	3	Count	7	11	1		19
		% of Q86	36.8%	57.9%	5.3%		100.0%
		% of Q19	13.2%	29.7%	25.0%		20.0%
		% of Total	7.4%	11.6%	1.1%		20.0%
	4	Count		3			3
		% of Q86		100.0%			100.0%
		% of Q19		8.1%			3.2%
		% of Total		3.2%			3.2%
Total		Count	53	37	4	1	95
		% of Q86	55.8%	38.9%	4.2%	1.1%	100.0%
		% of Q19	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	55.8%	38.9%	4.2%	1.1%	100.0%

			SA (A)	A (B)	D (C)	SD (D)
*Q19	19.	I benefited greatly from the initiative training.	1	2	3	4
Q86	86.	Technology has changed my approach to classroom management and instruction.	1	2	3	4

Q88 * Q19 Crosstabulation

			Q19				Total
			1	2	3	4	
Q88	1	Count	18	5		1	24
		% of Q88	75.0%	20.8%		4.2%	100.0%
		% of Q19	34.0%	13.9%		100.0%	25.5%
		% of Total	19.1%	5.3%		1.1%	25.5%
	2	Count	33	19	2		54
		% of Q88	61.1%	35.2%	3.7%		100.0%
		% of Q19	62.3%	52.8%	50.0%		57.4%
		% of Total	35.1%	20.2%	2.1%		57.4%
	3	Count	2	10	2		14
		% of Q88	14.3%	71.4%	14.3%		100.0%
		% of Q19	3.8%	27.8%	50.0%		14.9%
		% of Total	2.1%	10.6%	2.1%		14.9%
	4	Count		2			2
		% of Q88		100.0%			100.0%
		% of Q19		5.6%			2.1%
		% of Total		2.1%			2.1%
Total	Count	53	36	4	1	94	
	% of Q88	56.4%	38.3%	4.3%	1.1%	100.0%	
	% of Q19	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	56.4%	38.3%	4.3%	1.1%	100.0%	

			SA (A)	A (B)	D (C)	SD (D)
*Q19	19.	I benefited greatly from the initiative training.	1	2	3	4
Q88	88.	Technology integration has allowed students to become more self-reliant.	1	2	3	4

Crosstabs: Instructional Delivery

Q81 * Q22 Crosstabulation

			Q22					Total
			1	2	3	4	5	
Q81	1	Count	2	7	5			14
		% of Q81	14.3%	50.0%	35.7%			100.0%
		% of Q22	28.6%	14.0%	15.6%			14.7%
		% of Total	2.1%	7.4%	5.3%			14.7%
	2	Count	4	28	13	1		46
		% of Q81	8.7%	60.9%	28.3%	2.2%		100.0%
		% of Q22	57.1%	56.0%	40.6%	20.0%		48.4%
		% of Total	4.2%	29.5%	13.7%	1.1%		48.4%
	3	Count	1	15	13	2		31
		% of Q81	3.2%	48.4%	41.9%	6.5%		100.0%
		% of Q22	14.3%	30.0%	40.6%	40.0%		32.6%
		% of Total	1.1%	15.8%	13.7%	2.1%		32.6%
	4	Count			1	2	1	4
		% of Q81			25.0%	50.0%	25.0%	100.0%
		% of Q22			3.1%	40.0%	100.0%	4.2%
		% of Total			1.1%	2.1%	1.1%	4.2%
Total	Count	7	50	32	5	1	95	
	% of Q81	7.4%	52.6%	33.7%	5.3%	1.1%	100.0%	
	% of Q22	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	7.4%	52.6%	33.7%	5.3%	1.1%	100.0%	

*Q22	22.	My training on curriculum content software was adequate.	SA (A)	A (B)	D (C)	SD (D)
			1	2	3	4
Q81	81.	The computer initiative allows me to manage my classroom instruction.	1	2	3	4

Q84 * Q22 Crosstabulation

			Q22					Total
			1	2	3	4	5	
Q84	1	Count	3	15	6			24
		% of Q84	12.5%	62.5%	25.0%			100.0%
		% of Q22	42.9%	29.4%	18.8%			25.0%
		% of Total	3.1%	15.6%	6.3%			25.0%
	2	Count	4	35	18	3	1	61
		% of Q84	6.6%	57.4%	29.5%	4.9%	1.6%	100.0%
		% of Q22	57.1%	68.6%	56.3%	60.0%	100.0%	63.5%
		% of Total	4.2%	36.5%	18.8%	3.1%	1.0%	63.5%
	3	Count		1	8	1		10
		% of Q84		10.0%	80.0%	10.0%		100.0%
		% of Q22		2.0%	25.0%	20.0%		10.4%
		% of Total		1.0%	8.3%	1.0%		10.4%
	4	Count				1		1
		% of Q84				100.0%		100.0%
		% of Q22				20.0%		1.0%
		% of Total				1.0%		1.0%
Total	Count	7	51	32	5	1	96	
	% of Q84	7.3%	53.1%	33.3%	5.2%	1.0%	100.0%	
	% of Q22	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	7.3%	53.1%	33.3%	5.2%	1.0%	100.0%	

			SA (A)	A (B)	D (C)	SD (D)
*Q22	22.	My training on curriculum content software was adequate.	1	2	3	4
Q84	84.	As I plan for the subject matter to be presented in a lesson, I also plan how technology can be used to implement the unit.	1	2	3	4

Crosstabs: Development of Materials

Q60 * Q23 Crosstabulation

			Q23					Total
			1	2	3	4	5	
Q60	1	Count	4	9	1	1		15
		% of Q60	26.7%	60.0%	6.7%	6.7%		100.0%
		% of Q23	66.7%	17.3%	3.1%	20.0%		15.6%
		% of Total	4.2%	9.4%	1.0%	1.0%		15.6%
	2	Count	1	20	10	1		32
		% of Q60	3.1%	62.5%	31.3%	3.1%		100.0%
		% of Q23	16.7%	38.5%	31.3%	20.0%		33.3%
		% of Total	1.0%	20.8%	10.4%	1.0%		33.3%
	3	Count	1	22	17		1	41
		% of Q60	2.4%	53.7%	41.5%		2.4%	100.0%
		% of Q23	16.7%	42.3%	53.1%		100.0%	42.7%
		% of Total	1.0%	22.9%	17.7%		1.0%	42.7%
4	Count		1	4	3		8	
	% of Q60		12.5%	50.0%	37.5%		100.0%	
	% of Q23		1.9%	12.5%	60.0%		8.3%	
	% of Total		1.0%	4.2%	3.1%		8.3%	
Total	Count	6	52	32	5	1	96	
	% of Q60	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%	
	% of Q23	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%	

			SA (A)	A (B)	D (C)	SD (D)
*Q23	23.	My training on the software to assist with the development of materials and the administration of the classroom met my needs.	1	2	3	4
Q60	60.	I am better able to present more complex material to my students.	1	2	3	4

Q81 * Q23 Crosstabulation

			Q23					Total
			1	2	3	4	5	
Q81	1	Count	3	7	4			14
		% of Q81	21.4%	50.0%	28.6%			100.0%
		% of Q23	50.0%	13.7%	12.5%			14.7%
		% of Total	3.2%	7.4%	4.2%			14.7%
	2	Count	3	30	12	1		46
		% of Q81	6.5%	65.2%	26.1%	2.2%		100.0%
		% of Q23	50.0%	58.8%	37.5%	20.0%		48.4%
		% of Total	3.2%	31.6%	12.6%	1.1%		48.4%
	3	Count		14	15	2		31
		% of Q81		45.2%	48.4%	6.5%		100.0%
		% of Q23		27.5%	46.9%	40.0%		32.6%
		% of Total		14.7%	15.8%	2.1%		32.6%
	4	Count			1	2	1	4
		% of Q81			25.0%	50.0%	25.0%	100.0%
		% of Q23			3.1%	40.0%	100.0%	4.2%
		% of Total			1.1%	2.1%	1.1%	4.2%
Total		Count	6	51	32	5	1	95
		% of Q81	6.3%	53.7%	33.7%	5.3%	1.1%	100.0%
		% of Q23	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	6.3%	53.7%	33.7%	5.3%	1.1%	100.0%

			SA (A)	A (B)	D (C)	SD (D)
*Q23	23.	My training on the software to assist with the development of materials and the administration of the classroom met my needs.	1	2	3	4
Q81	81.	The computer initiative allows me to manage my classroom instruction.	1	2	3	4

Q82 * Q23 Crosstabulation

			Q23					Total
			1	2	3	4	5	
Q82	1	Count	5	12	6	1		24
		% of Q82	20.8%	50.0%	25.0%	4.2%		100.0%
		% of Q23	83.3%	23.1%	18.8%	20.0%		25.0%
		% of Total	5.2%	12.5%	6.3%	1.0%		25.0%
	2	Count	1	28	15			44
		% of Q82	2.3%	63.6%	34.1%			100.0%
		% of Q23	16.7%	53.8%	46.9%			45.8%
		% of Total	1.0%	29.2%	15.6%			45.8%
	3	Count		12	11	2	1	26
		% of Q82		46.2%	42.3%	7.7%	3.8%	100.0%
		% of Q23		23.1%	34.4%	40.0%	100.0%	27.1%
		% of Total		12.5%	11.5%	2.1%	1.0%	27.1%
4	Count				2		2	
	% of Q82				100.0%		100.0%	
	% of Q23				40.0%		2.1%	
	% of Total				2.1%		2.1%	
Total	Count	6	52	32	5	1	96	
	% of Q82	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%	
	% of Q23	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%	

			SA (A)	A (B)	D (C)	SD (D)
*Q23	23.	My training on the software to assist with the development of materials and the administration of the classroom met my needs.	1	2	3	4
Q82	82.	The computer initiative has been helpful to me in managing grades, communication, and student information.	1	2	3	4

Q84 * Q23 Crosstabulation

			Q23					Total
			1	2	3	4	5	
Q84	1	Count	3	17	4			24
		% of Q84	12.5%	70.8%	16.7%			100.0%
		% of Q23	50.0%	32.7%	12.5%			25.0%
		% of Total	3.1%	17.7%	4.2%			25.0%
	2	Count	3	31	23	3	1	61
		% of Q84	4.9%	50.8%	37.7%	4.9%	1.6%	100.0%
		% of Q23	50.0%	59.6%	71.9%	60.0%	100.0%	63.5%
		% of Total	3.1%	32.3%	24.0%	3.1%	1.0%	63.5%
	3	Count		4	5	1		10
		% of Q84		40.0%	50.0%	10.0%		100.0%
		% of Q23		7.7%	15.6%	20.0%		10.4%
		% of Total		4.2%	5.2%	1.0%		10.4%
	4	Count				1		1
		% of Q84				100.0%		100.0%
		% of Q23				20.0%		1.0%
		% of Total				1.0%		1.0%
Total		Count	6	52	32	5	1	96
		% of Q84	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%
		% of Q23	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%

			SA (A)	A (B)	D (C)	SD (D)
*Q23	23.	My training on the software to assist with the development of materials and the administration of the classroom met my needs.	1	2	3	4

Q84	84.	As I plan for the subject matter to be presented in a lesson, I also plan how technology can be used to implement the unit.	1	2	3	4
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Q85 * Q23 Crosstabulation

			Q23					Total
			1	2	3	4	5	
Q85	1	Count	4	9	4			17
		% of Q85	23.5%	52.9%	23.5%			100.0%
		% of Q23	66.7%	17.3%	12.5%			17.7%
		% of Total	4.2%	9.4%	4.2%			17.7%
	2	Count	2	36	21	2	1	62
		% of Q85	3.2%	58.1%	33.9%	3.2%	1.6%	100.0%
		% of Q23	33.3%	69.2%	65.6%	40.0%	100.0%	64.6%
		% of Total	2.1%	37.5%	21.9%	2.1%	1.0%	64.6%
	3	Count		7	6	2		15
		% of Q85		46.7%	40.0%	13.3%		100.0%
		% of Q23		13.5%	18.8%	40.0%		15.6%
		% of Total		7.3%	6.3%	2.1%		15.6%
	4	Count			1	1		2
		% of Q85			50.0%	50.0%		100.0%
		% of Q23			3.1%	20.0%		2.1%
		% of Total			1.0%	1.0%		2.1%
Total		Count	6	52	32	5	1	96
		% of Q85	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%
		% of Q23	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	6.3%	54.2%	33.3%	5.2%	1.0%	100.0%

			SA (A)	A (B)	D (C)	SD (D)
*Q23	23.	My training on the software to assist with the development of materials and the administration of the classroom met my needs.	1	2	3	4
Q85	85.	Technology has created greater opportunities for me to plan the instructional program for my students.	1	2	3	4

Q88 * Q23 Crosstabulation

			Q23					Total
			1	2	3	4	5	
Q88	1	Count	4	12	7	1		24
		% of Q88	16.7%	50.0%	29.2%	4.2%		100.0%
		% of Q23	66.7%	24.0%	21.9%	20.0%		25.5%
		% of Total	4.3%	12.8%	7.4%	1.1%		25.5%
	2	Count	2	34	16	2		54
		% of Q88	3.7%	63.0%	29.6%	3.7%		100.0%
		% of Q23	33.3%	68.0%	50.0%	40.0%		57.4%
		% of Total	2.1%	36.2%	17.0%	2.1%		57.4%
	3	Count		4	9		1	14
		% of Q88		28.6%	64.3%		7.1%	100.0%
		% of Q23		8.0%	28.1%		100.0%	14.9%
		% of Total		4.3%	9.6%		1.1%	14.9%
4	Count				2		2	
	% of Q88				100.0%		100.0%	
	% of Q23				40.0%		2.1%	
	% of Total				2.1%		2.1%	
Total	Count	6	50	32	5	1	94	
	% of Q88	6.4%	53.2%	34.0%	5.3%	1.1%	100.0%	
	% of Q23	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	6.4%	53.2%	34.0%	5.3%	1.1%	100.0%	

			SA (A)	A (B)	D (C)	SD (D)
*Q23	23.	My training on the software to assist with the development of materials and the administration of the classroom met my needs.	1	2	3	4
Q88	88.	Technology integration has allowed students to become more self-reliant..	1	2	3	4

Crosstabs: Initiative Support

Q89 * Q25 Crosstabulation

			Q25					Total
			1	2	3	4	5	
Q89	1	Count	9	5			1	15
		% of Q89	60.0%	33.3%			6.7%	100.0%
		% of Q25	22.0%	10.9%			100.0%	15.5%
		% of Total	9.3%	5.2%			1.0%	15.5%
	2	Count	24	23	2			49
		% of Q89	49.0%	46.9%	4.1%			100.0%
		% of Q25	58.5%	50.0%	33.3%			50.5%
		% of Total	24.7%	23.7%	2.1%			50.5%
	3	Count	6	18	4	2		30
		% of Q89	20.0%	60.0%	13.3%	6.7%		100.0%
		% of Q25	14.6%	39.1%	66.7%	66.7%		30.9%
		% of Total	6.2%	18.6%	4.1%	2.1%		30.9%
	4	Count	2			1		3
		% of Q89	66.7%			33.3%		100.0%
		% of Q25	4.9%			33.3%		3.1%
		% of Total	2.1%			1.0%		3.1%
Total		Count	41	46	6	3	1	97
		% of Q89	42.3%	47.4%	6.2%	3.1%	1.0%	100.0%
		% of Q25	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	42.3%	47.4%	6.2%	3.1%	1.0%	100.0%

- 1 (A)= excellent support (there when you need it / proactive)
- 2 (B)= average support (there when you ask for it / reactive)
- 3 (C)= less than average support (not there when needed or asked)
- 4 (D)= no support
- 5 (E)= don't know

*Q25	25.	School computer contact	1	2	3	4	5
				SA (A)	A (B)	D (C)	SD (D)
Q89	89.	The staff development programs related to technology have met my needs.		1	2	3	4

Q90 * Q27 Crosstabulation

			Q27				Total
			1	2	3	5	
Q90	1	Count	14	11		1	26
		% of Q90	53.8%	42.3%		3.8%	100.0%
		% of Q27	38.9%	22.4%		20.0%	26.8%
		% of Total	14.4%	11.3%		1.0%	26.8%
	2	Count	22	35	3	4	64
		% of Q90	34.4%	54.7%	4.7%	6.3%	100.0%
		% of Q27	61.1%	71.4%	42.9%	80.0%	66.0%
		% of Total	22.7%	36.1%	3.1%	4.1%	66.0%
	3	Count		2	3		5
		% of Q90		40.0%	60.0%		100.0%
		% of Q27		4.1%	42.9%		5.2%
		% of Total		2.1%	3.1%		5.2%
4	Count		1	1		2	
	% of Q90		50.0%	50.0%		100.0%	
	% of Q27		2.0%	14.3%		2.1%	
	% of Total		1.0%	1.0%		2.1%	
Total	Count	36	49	7	5	97	
	% of Q90	37.1%	50.5%	7.2%	5.2%	100.0%	
	% of Q27	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	37.1%	50.5%	7.2%	5.2%	100.0%	

- 1 (A)= excellent support (there when you need it / proactive)
- 2 (B)= average support (there when you ask for it / reactive)
- 3 (C)= less than average support (not there when needed or asked)
- 4 (D)= no support
- 5 (E)= don't know

*Q27	27.	Technology instructors	1	2	3	4	5
			SA (A)	A (B)	D (C)	SD (D)	
Q90	90.	I feel I have adequate support from administration	1	2	3	4	

Q90 * Q28 Crosstabulation

			Q28					Total
			1	2	3	4	5	
Q90	1	Count	16	4	4		2	26
		% of Q90	61.5%	15.4%	15.4%		7.7%	100.0%
		% of Q28	41.0%	10.5%	26.7%		50.0%	26.8%
		% of Total	16.5%	4.1%	4.1%		2.1%	26.8%
	2	Count	22	32	8		2	64
		% of Q90	34.4%	50.0%	12.5%		3.1%	100.0%
		% of Q28	56.4%	84.2%	53.3%		50.0%	66.0%
		% of Total	22.7%	33.0%	8.2%		2.1%	66.0%
	3	Count	1	2	2			5
		% of Q90	20.0%	40.0%	40.0%			100.0%
		% of Q28	2.6%	5.3%	13.3%			5.2%
		% of Total	1.0%	2.1%	2.1%			5.2%
4	Count			1	1		2	
	% of Q90			50.0%	50.0%		100.0%	
	% of Q28			6.7%	100.0%		2.1%	
	% of Total			1.0%	1.0%		2.1%	
Total	Count	39	38	15	1	4	97	
	% of Q90	40.2%	39.2%	15.5%	1.0%	4.1%	100.0%	
	% of Q28	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	40.2%	39.2%	15.5%	1.0%	4.1%	100.0%	

- 1 (A)= excellent support (there when you need it / proactive)
- 2 (B)= average support (there when you ask for it / reactive)
- 3 (C)= less than average support (not there when needed or asked)
- 4 (D)= no support
- 5 (E)= don't know

*Q28	28.	Computer instructional assistant (in school 1 day/week)	1	2	3	4	5
			SA (A)	A (B)	D (C)	SD (D)	
Q90	90.	I feel I have adequate support from administration	1	2	3	4	

Q90 * Q29 Crosstabulation

			Q29					Total
			1	2	3	4	5	
Q90	1	Count	21	1	1	1	2	26
		% of Q90	80.8%	3.8%	3.8%	3.8%	7.7%	100.0%
		% of Q29	72.4%	3.3%	11.1%	6.3%	15.4%	26.8%
		% of Total	21.6%	1.0%	1.0%	1.0%	2.1%	26.8%
	2	Count	8	29	8	9	10	64
		% of Q90	12.5%	45.3%	12.5%	14.1%	15.6%	100.0%
		% of Q29	27.6%	96.7%	88.9%	56.3%	76.9%	66.0%
		% of Total	8.2%	29.9%	8.2%	9.3%	10.3%	66.0%
	3	Count				4	1	5
		% of Q90				80.0%	20.0%	100.0%
		% of Q29				25.0%	7.7%	5.2%
		% of Total				4.1%	1.0%	5.2%
	4	Count				2		2
		% of Q90				100.0%		100.0%
		% of Q29				12.5%		2.1%
		% of Total				2.1%		2.1%
Total		Count	29	30	9	16	13	97
		% of Q90	29.9%	30.9%	9.3%	16.5%	13.4%	100.0%
		% of Q29	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	29.9%	30.9%	9.3%	16.5%	13.4%	100.0%

Q16 * Q32 Crosstabulation

			Q32				Total
			1	2	3	5	
Q16	1	Count	79	11	1		91
		% of Q16	86.8%	12.1%	1.1%		100.0%
		% of Q32	92.9%	100.0%	100.0%		92.9%
		% of Total	80.6%	11.2%	1.0%		92.9%
	2	Count	6			1	7
		% of Q16	85.7%			14.3%	100.0%
		% of Q32	7.1%			100.0%	7.1%
		% of Total	6.1%			1.0%	7.1%
Total		Count	85	11	1	1	98
		% of Q16	86.7%	11.2%	1.0%	1.0%	100.0%
		% of Q32	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	86.7%	11.2%	1.0%	1.0%	100.0%

1 (A)= excellent support (there when you need it / proactive)
 2 (B)= average support (there when you ask for it / reactive)
 3 (C)= less than average support (not there when needed or asked)
 4 (D)= no support
 5 (E)= don't know

*Q32

32.

Have you received adequate overall/administrative support
 (1)A. yes
 (2)B. no

Q16

16.

Instruction from other teachers
 (1)A. yes
 (2)B. no

*Q29 29. Principal 1 2 3 4 5

Q90 90. I feel I have adequate support from administration
 SA (A) A (B) D (C) SD (D)
 1 2 3 4

Correlations

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Pearson	1.000	.071	-.250*	.159	-.192	.144	-.064	-.077	-.051	.071	-.118	-.029
Correlation	.071	1.000	.082	-.070	-.105	-.017	.059	-.188	.010	.046	-.010	-.209*
	-.250*	.082	1.000	-.417**	.175	-.163	.038	.058	-.088	.151	.047	-.260**
	.159	-.070	1.000	-.417**	-.178	.352**	-.001	.149	.377**	-.134	-.063	.482**
	-.192	-.105	-.417**	1.000	1.000	-.112	.034	.084	.117	.019	.063	-.192
	.144	-.017	-.163	.352**	1.000	1.000	-.034	-.206*	-.041	-.137	-.212*	.086
	-.064	.059	.038	-.001	.034	-.034	1.000	.234*	.130	-.077	-.099	-.110
	-.077	-.188	.058	.149	.084	-.206*	.234*	1.000	.208*	-.106	.146	.227*
	-.051	.010	-.088	.377**	.117	-.041	.130	.208*	1.000	-.140	.068	.244*
	.071	.046	.151	-.134	.019	-.137	.064	.093	.108	1.000	-.011	-.025
	-.118	-.010	.047	-.063	.063	-.212*	-.099	.162	-.075	1.000	1.000	.237*
	-.029	-.209*	-.260**	.482**	-.192	.086	-.110	.227*	.244*	-.025	.237*	1.000
	.127	.052	.060	-.263**	.091	-.201*	-.139	-.143	-.062	.041	.120	-.131
	.057	-.053	-.017	-.193	.110	-.068	.048	-.164	-.095	-.002	-.056	-.169
	.040	-.037	.163	-.291**	.077	-.162	.033	.092	-.139	.081	.061	-.118
	.077	-.071	-.007	-.102	.192	-.018	.064	-.093	-.108	.110	.008	-.175
	-.094	-.065	.151	.068	.039	.164	.059	.162	-.075	-.052	.109	.011
	.130	.104	.040	.077	-.175	-.124	-.059	.027	-.024	.096	.022	.020
	-.096	.205*	.141	.161	.019	-.281**	-.186	.006	.182	.076	.160	.065
	-.054	-.055	.021	-.321**	-.032	-.006	-.030	-.180	-.031	-.014	.010	-.103
	-.138	-.007	.197	-.177	.023	-.046	-.009	.020	-.116	.143	.097	-.104
	-.012	-.051	.128	.069	-.061	-.002	.062	.136	-.101	-.081	.075	.064
	-.009	-.026	.031	.125	.027	-.019	.066	.081	-.031	-.058	.161	-.004
	.018	.012	-.036	-.066	-.044	-.117	-.122	-.084	-.035	-.027	.228*	-.023
	.004	-.019	.242*	-.200*	-.024	-.086	-.081	.005	-.182	.056	.031	-.132
	.023	.047	-.032	-.060	.008	.046	-.018	-.078	-.046	.199	.103	.016
	.042	-.006	.066	-.085	.018	.010	.113	-.105	-.115	.264**	.117	.012
	-.113	.073	.208*	-.168	-.002	-.103	.021	-.084	-.307**	.115	.038	-.108
	.052	.081	.055	-.254*	-.005	-.131	.057	-.057	-.085	.053	.105	-.076
	-.006	.071	.109	.123	.083	.050	.034	.035	-.158	.051	-.159	-.002
	.077	.065	-.014	-.004	.115	.027	.039	-.087	-.136	.084	.016	-.044
	-.058	-.083	-.065	-.007	.194	.040	-.011	-.087	-.082	.117	-.074	.105
	.043	-.004	.117	-.394**	-.169	.190	.067	-.168	-.481**	-.087	-.311**	-.335**
	-.001	.020	.068	-.342**	-.129	.256*	.075	-.196	-.367**	-.046	-.256*	-.252*
	.029	.076	.029	-.102	.010	-.072	-.121	.044	-.138	.069	.017	-.097
	-.023	.248*	.025	.088	.029	-.071	.101	.063	.062	.055	.232*	.128

Also note that "*" represent p values less than or equal to .05 and "**" represent p values less than or equal to .01

Correlations

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Pearson	1.000	.071	-.250*	.159	-.192	.144	-.064	-.077	-.051	.071	-.118	-.029
Correlation	.071	1.000	.082	-.070	-.105	-.017	.059	-.188	.010	.046	-.010	-.209*
	-.250*	.082	1.000	-.417**	.175	-.163	.038	.058	-.088	.151	.047	-.260**
	.159	-.070	1.000	-.417**	-.178	.352**	-.001	.149	.377**	-.134	-.063	.482**
	-.192	.082	-.417**	1.000	1.000	-.112	.034	.084	.117	.019	.063	-.192
	.144	-.017	-.163	.352**	1.000	1.000	-.034	-.206*	-.041	-.137	-.212*	.086
	-.064	.059	.038	-.001	.034	-.034	1.000	.234*	.130	-.077	-.099	-.110
	-.077	-.188	.058	.149	.084	-.206*	.234*	1.000	.208*	-.106	.146	.227*
	-.051	.010	-.088	.377**	.117	-.041	.130	.208*	1.000	-.140	.068	.244*
	.071	.046	.151	-.134	.019	-.137	.130	.208*	.140	1.000	-.011	-.025
	-.118	-.010	.047	-.063	.063	-.212*	-.099	.146	-.140	1.000	1.000	.237*
	-.029	-.209*	-.260**	.482**	-.192	.086	-.110	.227*	.244*	-.025	.237*	1.000
	.127	.052	.060	-.263**	.091	-.201*	-.139	-.143	-.062	.041	.120	-.131
	.057	-.053	-.017	-.193	.110	-.068	.048	-.164	-.095	-.002	-.056	-.169
	.040	-.037	.163	-.291**	.077	-.162	.033	.092	-.139	.081	.061	-.118
	.077	-.071	-.007	-.102	.192	-.018	.064	-.093	-.108	.110	.008	-.175
	-.094	-.065	.151	.068	.039	.164	.059	.162	-.075	-.052	.109	.011
	.130	.104	.040	.077	-.175	-.124	-.059	.027	-.024	.096	.022	.020
	-.096	.205*	.141	.161	.019	-.281**	-.186	.006	.182	.076	.160	.065
	-.054	-.055	.021	-.321**	-.032	-.006	-.030	-.180	-.031	-.014	.010	-.103
	-.138	-.007	.197	-.177	.023	-.046	-.009	.020	-.116	.143	.097	-.104
	-.012	-.051	.128	.069	-.061	-.002	.062	.136	-.101	-.081	.075	.064
	-.009	-.026	.031	.125	.027	-.019	.066	.081	-.031	-.058	.161	-.004
	.018	.012	-.036	-.066	-.044	-.117	-.122	-.084	-.035	-.027	.228*	-.023
	.004	-.019	.242*	-.200*	-.024	-.086	-.081	.005	-.182	.056	.031	-.132
	.023	.047	-.032	-.060	.008	.046	-.018	-.078	-.046	.199	.103	.016
	.042	-.006	.066	-.085	.018	.010	.113	-.105	-.115	.264**	.117	.012
	-.113	.073	.208*	-.168	-.002	-.103	.021	-.084	-.307**	.115	.038	-.108
	.052	.081	.055	-.254*	-.005	-.131	.057	-.057	-.085	.053	.105	-.076
	-.006	.071	.109	.123	.083	.050	.034	.035	-.158	.051	-.159	-.002
	.077	.065	-.014	-.004	.115	.027	.039	-.087	-.136	.084	.016	-.044
	-.058	-.083	-.065	-.007	.194	.040	-.011	-.087	-.082	.117	-.074	.105
	.043	-.004	.117	-.394**	-.169	.190	.067	-.168	-.481**	-.087	-.311**	-.335**
	-.001	.020	.068	-.342**	-.129	.256*	.075	-.196	-.367**	-.046	-.256*	-.252*
	.029	.076	.029	-.102	.010	-.072	-.121	.044	-.138	.069	.017	-.097
	-.023	.248*	.025	.088	.029	-.071	.101	.063	.062	.055	.232*	.128

Correlations

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Pearson												
Correlation												
Q37	-.004	-.309**	.109	-.019	.083	.139	.056	.036	.080	.069	-.109	.004
Q38	-.125	-.244*	.039	-.009	-.009	-.133	-.097	.209*	.063	-.175	.026	.060
Q39	-.034	-.064	.016	.078	.137	-.224*	-.044	.163	.125	.112	-.047	.055
Q40	-.347**	-.043	.083	-.070	.035	-.219*	.093	.170	.031	.012	.269**	.033
Q41	-.175	-.157	.038	.144	.154	.031	-.059	.196	.215*	-.065	.114	.085
Q42	-.172	-.095	.149	.042	.097	-.043	.006	-.024	.175	-.136	.011	-.007
Q43	-.127	-.115	.033	-.103	-.033	-.075	-.162	-.436**	.018	.069	.183	-.057
Q44	.018	-.145	-.121	-.079	-.034	-.091	-.109	-.249*	.095	.013	.153	-.026
Q45	-.122	-.285**	.164	.070	.138	.102	-.070	.107	.090	-.047	.007	.039
Q46	-.152	-.157	.050	-.089	-.143	-.215*	-.008	.040	-.124	.059	.123	.120
Q47	-.108	.022	.097	-.109	-.076	.058	-.058	-.112	-.240*	-.083	-.217*	-.118
Q48	-.143	.187	-.019	-.126	-.090	-.245*	.012	-.062	-.227*	.054	.073	-.014
Q49	-.292**	.054	.124	-.097	.105	-.169	.093	-.052	.025	.030	.170	.011
Q50	-.160	-.056	.049	-.059	.007	-.194	.011	-.058	.096	.093	.166	.070
Q51	-.113	-.169	.116	.003	.113	-.051	-.095	.095	-.046	.105	.191	.145
Q52	-.154	-.266**	-.098	.082	.008	.042	-.062	.191	-.013	-.022	.066	.061
Q53	-.142	-.120	-.024	.093	.128	-.169	-.011	.090	.194	.091	.095	.135
Sig.												
(2-tailed)												
Q1	.488	.488	.013	.117	.058	.158	.529	.451	.618	.485	.248	.775
Q2	.488	.488	.421	.494	.302	.872	.562	.064	.919	.654	.925	.039
Q3	.013	.421	.421	.000	.085	.110	.711	.568	.391	.139	.649	.010
Q4	.117	.494	.000	.000	.079	.000	.995	.143	.000	.190	.540	.000
Q5	.058	.302	.085	.079	.079	.271	.737	.410	.251	.849	.538	.058
Q6	.158	.872	.110	.000	.271	.737	.739	.042	.692	.179	.036	.397
Q7	.529	.562	.711	.995	.737	.739	.739	.020	.203	.451	.334	.281
Q8	.451	.064	.568	.143	.410	.042	.020	.040	.040	.300	.152	.025
Q9	.618	.919	.391	.000	.251	.692	.203	.040	.169	.169	.508	.015
Q10	.485	.654	.139	.190	.849	.179	.451	.300	.169	.169	.912	.809
Q11	.248	.925	.649	.540	.538	.036	.334	.152	.508	.912	.912	.019
Q12	.039	.039	.010	.000	.058	.397	.281	.025	.015	.809	.019	.200
Q13	.212	.614	.555	.009	.373	.048	.173	.160	.543	.689	.240	.200
Q14	.576	.606	.868	.057	.282	.507	.640	.106	.353	.981	.587	.097
Q15	.696	.719	.108	.004	.453	.111	.744	.369	.174	.427	.548	.248
Q16	.452	.488	.946	.317	.058	.861	.529	.361	.291	.279	.939	.084
Q17	.355	.523	.137	.504	.700	.108	.562	.110	.464	.612	.287	.913
Q18	.206	.312	.699	.455	.088	.230	.568	.792	.815	.353	.828	.846
Q19	.355	.045	.170	.118	.855	.006	.069	.954	.076	.459	.120	.529

Correlations

	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
Pearson	.127	.057	.040	.077	-.094	.130	-.096	-.054	-.138	-.012	-.009	.018
Correlation	.052	-.053	-.037	-.071	-.065	.104	.205*	-.055	-.007	-.051	-.026	.012
Q3	.060	-.017	.163	-.007	.151	.040	.141	.021	.197	.128	.031	-.036
Q4	-.263**	-.193	-.291**	-.102	.068	.077	.161	-.321**	-.177	.069	.125	-.066
Q5	.091	.110	.077	.192	.039	-.175	.019	-.032	.023	-.061	.027	-.044
Q6	-.201*	-.068	-.162	-.018	.164	-.124	-.281**	-.006	-.046	-.002	-.019	-.117
Q7	-.139	.048	.033	.064	.059	-.059	-.186	-.030	-.009	.062	.066	-.122
Q8	-.143	-.164	.092	-.093	.162	.027	.006	-.180	.020	.136	.081	-.084
Q9	-.062	-.095	-.139	-.108	-.075	-.024	.182	-.031	-.116	-.101	-.031	-.035
Q10	.041	-.002	.081	.110	-.052	.096	.076	-.014	.143	-.081	-.058	-.027
Q11	.120	-.056	.061	.008	.109	.022	.160	.010	.097	.075	.161	.228*
Q12	-.131	-.169	-.118	-.175	.011	.020	.065	-.103	-.104	.064	-.004	-.023
Q13	1.000	.042	.315**	-.022	-.005	-.022	.160	.185	.092	.002	-.004	-.171
Q14	.042	1.000	.335**	.143	-.053	-.064	-.143	.064	-.025	-.015	-.018	.010
Q15	.315**	.335**	1.000	-.040	-.037	1.000	.075	.145	.085	-.149	-.046	-.108
Q16	-.022	.143	-.040	1.000	.094	.006	-.096	-.055	.135	.152	.092	.298**
Q17	-.005	-.053	-.037	.094	1.000	1.000	.137	-.055	.135	.092	-.166	.012
Q18	-.022	-.064	.006	-.222*	.006	1.000	.075	-.156	-.133	-.051	-.304**	-.076
Q19	.160	-.143	.006	-.096	.137	.075	1.000	-.113	.263**	.290**	.306**	.026
Q20	.185	.064	.006	.145	-.055	-.156	-.113	1.000	-.076	-.225*	-.304**	.026
Q21	.092	-.025	.085	.085	.135	-.133	.263**	-.076	1.000	.402**	.357**	.165
Q22	.002	-.015	-.149	-.149	.152	-.051	.290**	-.225*	.402**	1.000	.741**	.062
Q23	-.004	-.018	.006	-.046	.092	-.166	.306**	-.304**	.357**	.741**	1.000	.121
Q24	-.171	.010	-.108	.298**	.012	-.076	.026	.026	.165	.062	.121	1.000
Q25	-.011	.007	-.041	.046	.035	.215*	-.042	-.165	.035	.199	.189	.178
Q26	.070	.065	.103	.216*	.047	-.028	-.068	-.178	.204*	.123	.196	.421**
Q27	-.016	-.134	.022	.042	.175	-.079	.140	-.055	.142	.304**	.312**	.097
Q28	-.030	.076	.312**	-.090	.160	.047	.098	-.149	-.021	.090	.078	.086
Q29	-.007	.029	-.107	.171	-.039	.168	-.041	-.040	-.023	-.027	-.043	.248*
Q30	-.036	-.010	.205*	-.072	.112	-.011	.148	-.262*	.074	.281**	.222*	-.021
Q31	.060	-.014	.060	.077	.024	-.056	.048	-.174	.246*	.472**	.361**	.154
Q32	.053	-.067	-.047	.206*	-.003	.074	.107	-.015	.227*	.163	.082	.092
Q33	-.012	.098	.196	.191	.047	-.065	-.192	.126	.084	-.006	-.107	-.039
Q34	-.094	.037	.117	.046	-.007	-.094	-.305**	.182	-.051	-.141	-.231*	-.072
Q35	.121	.004	.246*	-.029	.076	-.001	.187	.022	.318**	.102	.067	.040
Q36	-.190	-.056	-.158	.023	-.139	.105	.014	-.248*	-.208*	-.040	.038	.040

Correlations

	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
Pearson												
Correlation												
Q37	-.062	.058	-.013	.122	.167	.002	-.049	-.072	.069	.055	.044	-.044
Q38	-.092	-.013	-.095	-.112	.137	-.055	.079	-.114	.137	.295**	.214*	.091
Q39	-.152	-.072	-.181	.082	.141	-.084	.120	-.088	.040	.180	.269**	.179
Q40	-.013	-.155	.018	.000	.106	.018	.130	-.004	-.063	.043	.083	.208*
Q41	.153	-.082	.037	.071	.177	-.118	.095	-.204*	-.004	.102	.163	.129
Q42	-.030	-.077	-.054	-.103	.275**	.070	.185	-.131	.019	.065	.036	-.109
Q43	.046	.094	.066	.127	.014	.060	.169	-.008	-.008	.078	.137	.106
Q44	.048	.097	.068	.081	-.145	.062	.113	.167	-.161	-.041	.071	.089
Q45	-.029	-.024	.026	-.020	.302**	-.004	.049	-.080	.173	.266**	.231*	.235*
Q46	.157	-.043	.146	.023	.189	-.005	.283**	-.020	.180	.254*	.227*	-.089
Q47	-.202*	.102	.107	-.086	.105	-.029	-.032	-.243*	.135	.113	.008	.028
Q48	-.014	.027	.019	-.072	-.121	.275**	.134	-.132	-.040	.146	.086	.185
Q49	.243*	-.053	.064	.124	.054	.159	.154	.039	.077	.025	.012	-.056
Q50	.165	-.023	-.062	.211*	-.001	-.020	.074	.171	.098	.017	.056	.011
Q51	.110	-.137	-.044	.113	.104	.075	.130	-.024	.075	.114	.162	.003
Q52	-.097	.003	.002	.204*	.327**	.029	-.031	-.064	.082	-.028	.150	.092
Q53	.000	-.144	-.052	.088	.081	-.103	.089	-.014	.092	-.062	.095	.084
Sig.												
(2-tailed)												
Q1	.212	.576	.696	.452	.355	.206	.355	.602	.180	.905	.934	.860
Q2	.614	.606	.719	.488	.523	.312	.045	.595	.945	.624	.803	.903
Q3	.555	.868	.108	.946	.137	.699	.170	.839	.055	.214	.766	.728
Q4	.009	.057	.004	.317	.504	.455	.118	.001	.084	.507	.226	.518
Q5	.373	.282	.453	.058	.700	.088	.855	.757	.825	.558	.791	.664
Q6	.048	.507	.111	.861	.108	.230	.006	.952	.655	.981	.855	.249
Q7	.173	.640	.744	.529	.562	.568	.069	.772	.930	.550	.521	.230
Q8	.160	.106	.369	.361	.110	.792	.954	.079	.843	.187	.435	.413
Q9	.543	.353	.174	.291	.464	.815	.076	.764	.258	.327	.763	.735
Q10	.689	.981	.427	.279	.612	.353	.459	.895	.164	.433	.577	.788
Q11	.240	.587	.548	.939	.287	.828	.120	.922	.346	.469	.117	.024
Q12	.200	.097	.248	.084	.913	.846	.529	.320	.311	.539	.973	.821
Q13		.684	.002	.827	.964	.828	.120	.071	.370	.981	.972	.092
Q14	.684		.001	.160	.606	.536	.165	.538	.811	.884	.862	.921
Q15	.002	.001		.696	.719							.289
Q16	.827	.160	.696		.355	.030	.355	.159	.411	.146	.654	.003
Q17	.964	.606	.719	.355		.953	.184	.595	.189	.139	.372	.903
Q18	.828	.536		.030	.953		.465	.128	.198	.620	.107	.460
Q19	.120	.165		.355	.184	.465		.274	.010	.004	.002	.799

Correlations

	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
Sig. (2-tailed)												
Q20	.071	.538		.159	.595	.128	.274	.461	.461	.028	.003	.803
Q21	.370	.811		.411	.189	.198	.010	.461		.000	.000	.108
Q22	.981	.884		.146	.139	.620	.004	.028	.000		.000	.547
Q23	.972	.862		.654	.372	.107	.002	.003	.000	.000		.242
Q24	.092	.921	.289	.003	.903	.460	.799	.803	.108	.547	.242	
Q25	.916	.948	.689	.650	.732	.035	.688	.108	.733	.052	.065	.079
Q26	.498	.526	.316	.034	.649	.785	.512	.085	.048	.234	.058	.000
Q27	.872	.189	.830	.679	.084	.445	.174	.597	.166	.003	.002	.342
Q28	.769	.455	.002	.380	.116	.648	.341	.148	.837	.385	.448	.400
Q29	.946	.778	.296	.092	.702	.103	.694	.700	.823	.792	.674	.014
Q30	.724	.920	.043	.481	.271	.913	.152	.010	.471	.006	.030	.834
Q31	.559	.889	.557	.452	.818	.586	.640	.091	.016	.000	.000	.131
Q32	.605	.513	.647	.042	.975	.475	.298	.884	.026	.113	.428	.367
Q33	.909	.338	.054	.062	.651	.529	.062	.224	.418	.951	.302	.702
Q34	.362	.716	.254	.652	.944	.363	.003	.077	.626	.172	.024	.483
Q35	.234	.972	.015	.780	.456	.990	.069	.833	.002	.323	.515	.693
Q36	.060	.586	.120	.819	.172	.307	.895	.015	.042	.698	.716	.695
Q37	.545	.570	.898	.230	.100	.983	.635	.484	.505	.597	.673	.666
Q38	.366	.902	.352	.274	.179	.596	.445	.267	.182	.004	.037	.375
Q39	.135	.480	.075	.424	.166	.414	.244	.396	.702	.079	.008	.078
Q40	.895	.128	.860	1.000	.297	.864	.206	.970	.545	.675	.420	.040
Q41	.135	.424	.719	.489	.083	.256	.361	.047	.972	.326	.115	.210
Q42	.769	.453	.599	.312	.006	.497	.071	.204	.852	.530	.727	.285
Q43	.651	.356	.519	.214	.894	.560	.100	.939	.939	.449	.182	.300
Q44	.641	.341	.506	.427	.154	.546	.275	.104	.116	.693	.491	.385
Q45	.777	.815	.796	.842	.003	.966	.633	.438	.091	.009	.024	.020
Q46	.123	.676	.151	.822	.062	.960	.005	.843	.080	.012	.026	.382
Q47	.046	.318	.297	.401	.302	.776	.755	.017	.190	.271	.940	.787
Q48	.892	.795	.855	.483	.236	.007	.192	.200	.700	.156	.404	.068
Q49	.016	.601	.528	.224	.598	.123	.135	.706	.458	.805	.907	.582
Q50	.104	.822	.541	.037	.991	.847	.473	.096	.342	.871	.585	.917
Q51	.281	.179	.666	.267	.307	.468	.208	.815	.470	.271	.115	.974
Q52	.344	.979	.985	.043	.001	.776	.763	.536	.425	.785	.143	.366
Q53	.997	.158	.613	.389	.428	.317	.388	.893	.373	.547	.358	.413
N	98	98	98	98	98	96	96	96	96	96	96	98
Q1	98	98	98	98	98	96	96	96	96	96	96	98
Q2	98	98	98	98	98	96	96	96	96	96	96	98

Correlations

	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
N												
Q3	98	98	98	98	98	96	96	96	96	96	96	98
Q4	98	98	98	98	98	96	96	96	96	96	96	98
Q5	98	98	98	98	98	96	96	96	96	96	96	98
Q6	98	98	98	98	98	96	96	96	96	96	96	98
Q7	98	98	98	98	98	96	96	96	96	96	96	98
Q8	98	98	98	98	98	96	96	96	96	96	96	98
Q9	98	98	98	98	98	96	96	96	96	96	96	98
Q10	98	98	98	98	98	96	96	96	96	96	96	98
Q11	98	98	98	98	98	96	96	96	96	96	96	98
Q12	98	98	98	98	98	96	96	96	96	96	96	98
Q13	98	98	98	98	98	96	96	96	96	96	96	98
Q14	98	98	98	98	98	96	96	96	96	96	96	98
Q15	98	98	98	98	98	96	96	96	96	96	96	98
Q16	98	98	98	98	98	96	96	96	96	96	96	98
Q17	98	98	98	98	98	96	96	96	96	96	96	98
Q18	96	96	96	96	96	96	96	96	96	96	96	96
Q19	96	96	96	96	96	96	96	96	96	96	96	96
Q20	96	96	96	96	96	96	96	96	96	96	96	96
Q21	96	96	96	96	96	96	96	96	96	96	96	96
Q22	96	96	96	96	96	96	96	96	96	96	96	96
Q23	96	96	96	96	96	96	96	96	96	96	96	96
Q24	98	98	98	98	98	96	96	96	96	96	96	98
Q25	98	98	98	98	98	96	96	96	96	96	96	98
Q26	97	97	97	97	97	95	95	95	95	95	95	97
Q27	98	98	98	98	98	96	96	96	96	96	96	98
Q28	98	98	98	98	98	96	96	96	96	96	96	98
Q29	98	98	98	98	98	96	96	96	96	96	96	98
Q30	98	98	98	98	98	96	96	96	96	96	96	98
Q31	98	98	98	98	98	96	96	96	96	96	96	98
Q32	98	98	98	98	98	96	96	96	96	96	96	98
Q33	97	97	97	97	97	95	95	95	95	95	95	97
Q34	97	97	97	97	97	95	95	95	95	95	95	97
Q35	98	98	98	98	98	96	96	96	96	96	96	98
Q36	98	98	98	98	98	96	96	96	96	96	96	98
Q37	98	98	98	98	98	96	96	96	96	96	96	98
Q38	98	98	98	98	98	96	96	96	96	96	96	98

Correlations

	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
N												
Q39	98	98	98	98	98	98	96	96	96	96	96	98
Q40	98	98	98	98	98	96	96	96	96	96	96	98
Q41	97	97	97	97	97	95	95	95	95	95	95	97
Q42	98	98	98	98	98	96	96	96	96	96	96	98
Q43	98	98	98	98	98	96	96	96	96	96	96	98
Q44	98	98	98	98	98	96	96	96	96	96	96	98
Q45	98	98	98	98	98	96	96	96	96	96	96	98
Q46	98	98	98	98	98	96	96	96	96	96	96	98
Q47	98	98	98	98	98	96	96	96	96	96	96	98
Q48	98	98	98	98	98	96	96	96	96	96	96	98
Q49	98	98	98	98	98	96	96	96	96	96	96	98
Q50	98	98	98	98	98	96	96	96	96	96	96	98
Q51	98	98	98	98	98	96	96	96	96	96	96	98
Q52	98	98	98	98	98	96	96	96	96	96	96	98
Q53	98	98	98	98	98	96	96	96	96	96	96	98

Correlations

	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36
Pearson	.004	.023	.042	-.113	.052	-.006	.077	-.058	.043	-.001	.029	-.023
Correlation	-.019	.047	-.006	.073	.081	.071	.065	-.083	-.004	.020	.076	.248*
	.242*	-.032	.066	.208*	.055	.109	-.014	-.065	.117	.068	.029	.025
	-.200*	-.060	-.085	-.168	-.254*	.123	-.004	-.007	-.394**	-.342**	-.102	.088
	-.024	.008	.018	-.002	-.005	.083	.115	.194	-.169	-.129	.010	.029
	-.086	.046	.010	-.103	-.131	.050	.027	.040	.190	.256*	-.072	-.071
	-.081	-.018	.113	.021	.057	.034	.039	-.011	.067	.075	-.121	.101
	.005	-.078	-.105	-.084	-.057	.035	-.087	-.087	-.168	-.196	.044	.063
	-.182	-.046	-.115	-.307**	-.085	-.158	-.136	-.082	-.481**	-.367**	-.138	.062
	.056	.199	.264**	.115	.053	.051	.084	.117	-.087	-.046	.069	.055
	.031	.103	.117	.038	.105	-.159	.016	-.074	-.311**	-.256*	.017	.232*
	-.132	.016	.012	-.108	-.076	-.002	-.044	.105	-.335**	-.252*	-.097	.128
	-.011	.070	-.016	-.030	-.007	-.036	.060	.053	-.012	-.094	.121	-.190
	.007	.065	-.134	.076	.029	-.010	-.014	-.067	.098	.037	.004	-.056
	-.041	.103	.022	.312**	-.107	.205*	.060	-.047	.196	.117	.246*	-.158
	.046	.216*	.042	-.090	.171	-.072	.077	.206*	.191	.046	-.029	.023
	.035	.047	.175	.160	-.039	.112	.024	-.003	.047	-.007	.076	-.139
	.215*	-.028	-.079	.047	.168	-.011	-.056	.074	-.065	-.094	-.001	.105
	-.042	-.068	.140	.098	-.041	.148	.048	.107	-.192	-.305**	.187	.014
	-.165	-.178	-.055	-.149	-.040	-.282*	-.174	-.015	.126	.182	.022	-.248*
	.035	.204*	.142	-.021	-.023	.074	.246*	.227*	.084	-.051	.318**	-.208*
	.199	.123	.304**	.090	-.027	.281**	.472**	.163	-.006	-.141	.102	-.040
	.189	.196	.312**	.078	-.043	.222*	.361**	.082	-.107	-.231*	.067	.038
	.178	.421**	.097	.086	.248*	-.021	.154	.092	-.039	-.072	.040	.040
	1.000	.346**	.153	.223*	.370**	.011	.193	.209*	.149	.066	.157	.126
	.346**	1.000	.228*	.284**	.311**	.115	.380**	.262**	-.019	-.126	.042	.059
	.153	.228*	1.000	.417**	.097	.210*	.254*	.151	.036	-.028	.016	-.067
	.223*	.284**	.417**	1.000	.132	.409**	.165	.037	.240*	.165	.095	-.081
	.370**	.311**	.097	.132	1.000	-.026	.147	.196	.162	.077	-.042	.133
	.011	.115	.210*	.409**	-.026	1.000	.244*	.012	.167	.073	-.008	.036
	.193	.380**	.254*	.165	.147	.244*	1.000	.450**	.031	-.139	.076	-.019
	.209*	.262**	.151	.037	.196	.012	.450**	1.000	.037	-.004	.247*	-.135
	.149	-.019	.036	.240*	.162	.167	.031	.037	1.000	.675**	.005	-.062
	.066	-.126	-.028	.165	.077	.073	-.139	-.004	.675**	1.000	.037	-.099
	.157	.042	.016	.095	-.042	-.008	.076	.247*	.005	.037	1.000	-.507**
	.126	.059	-.067	-.081	.133	.036	-.019	-.135	-.062	-.099	-.507**	1.000

Correlations

	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36
Pearson												
Correlation												
Q37	.080	.054	-.116	-.013	.082	-.005	-.051	-.044	.081	.114	-.075	-.188
Q38	-.040	-.160	.022	-.030	-.024	.015	-.034	-.043	-.075	-.172	.176	-.308**
Q39	.110	.007	.151	.144	.059	.046	.116	.076	-.222*	-.300**	.063	.007
Q40	.035	.138	.057	.214*	-.039	-.020	.069	.024	-.032	-.092	-.017	.152
Q41	.015	.247*	-.022	-.027	-.106	.008	.064	.033	-.170	-.149	.077	.012
Q42	.152	-.101	-.057	-.084	-.057	-.027	.000	.045	-.016	.045	.051	-.056
Q43	.339**	.218*	.233*	.124	.142	-.044	.014	.033	-.040	-.003	.086	.011
Q44	.206*	.112	.105	.063	.156	-.194	-.159	-.061	-.086	-.083	.024	-.010
Q45	.129	.045	.116	.073	.140	.087	.031	.117	.004	.076	.069	-.193
Q46	-.038	-.183	.235*	.054	-.098	.189	-.051	-.075	.092	.112	-.031	.013
Q47	.039	.020	.143	.185	.083	.193	.003	-.031	.180	.212*	.038	-.089
Q48	.269**	.083	.059	.277**	.219*	.015	.036	-.010	.011	.094	-.049	.248*
Q49	-.028	.015	.193	.111	-.050	-.013	-.004	.172	-.183	-.122	-.020	-.010
Q50	.026	-.013	.094	.030	.008	-.144	.040	.093	-.145	-.174	-.092	.057
Q51	.226*	-.059	.187	-.017	-.026	-.094	-.028	.132	-.245*	-.148	-.056	.062
Q52	.126	.022	.067	-.015	-.022	.007	-.143	.004	-.109	-.067	.054	-.157
Q53	-.058	.005	.099	.076	-.110	-.153	-.119	-.103	-.284**	-.195	-.087	.051
Sig.												
(2-tailed)												
Q1	.972	.825	.679	.269	.613	.957	.452	.569	.677	.996	.780	.819
Q2	.856	.649	.949	.476	.430	.490	.525	.418	.972	.849	.456	.014
Q3	.016	.756	.522	.040	.590	.285	.893	.522	.256	.510	.775	.803
Q4	.048	.560	.403	.099	.012	.228	.968	.943	.000	.001	.318	.386
Q5	.812	.939	.863	.985	.959	.416	.258	.056	.097	.206	.920	.778
Q6	.398	.653	.923	.313	.197	.628	.792	.699	.063	.011	.483	.487
Q7	.430	.862	.267	.839	.576	.738	.706	.911	.514	.468	.234	.323
Q8	.962	.449	.305	.410	.579	.730	.394	.392	.101	.054	.664	.539
Q9	.073	.652	.258	.002	.407	.120	.182	.421	.000	.000	.174	.546
Q10	.586	.051	.009	.259	.604	.618	.409	.253	.399	.655	.498	.592
Q11	.762	.317	.253	.709	.304	.118	.878	.469	.002	.012	.871	.022
Q12	.196	.875	.906	.288	.459	.984	.668	.306	.001	.013	.342	.209
Q13	.916	.498	.872	.769	.946	.724	.559	.605	.909	.362	.234	.060
Q14	.948	.526	.189	.455	.778	.920	.889	.513	.338	.716	.972	.586
Q15	.689	.316	.830	.002	.296	.043	.557	.647	.054	.254	.015	.120
Q16	.650	.034	.679	.380	.092	.481	.452	.042	.062	.652	.780	.819
Q17	.732	.649	.084	.116	.702	.271	.818	.975	.651	.944	.456	.172
Q18	.035	.785	.445	.648	.103	.913	.586	.475	.529	.363	.990	.307
Q19	.688	.512	.174	.341	.694	.152	.640	.298	.062	.003	.069	.895

Correlations

	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36
Sig. (2-tailed)	.108	.085	.597	.148	.700	.010	.091	.884	.224	.077	.833	.015
Q20	.733	.048	.166	.837	.823	.471	.016	.026	.418	.626	.002	.042
Q21	.052	.234	.003	.385	.792	.006	.000	.113	.951	.172	.323	.698
Q22	.065	.058	.002	.448	.674	.030	.000	.428	.302	.024	.515	.716
Q23	.079	.000	.342	.400	.014	.834	.131	.367	.702	.483	.693	.695
Q24		.001	.132	.027	.000	.914	.057	.039	.145	.518	.123	.217
Q25	.001		.025	.005	.002	.263	.000	.010	.856	.222	.684	.565
Q26	.132	.025		.000	.340	.038	.012	.137	.724	.788	.878	.513
Q27	.027	.005	.000		.193	.000	.105	.716	.018	.105	.353	.427
Q28	.000	.002	.340	.193		.797	.148	.053	.113	.456	.683	.193
Q29	.914	.263	.038	.000	.797		.016	.908	.102	.478	.941	.725
Q30	.057	.000	.012	.105	.148	.016		.000	.763	.175	.455	.855
Q31	.039	.010	.137	.716	.053	.908	.000		.722	.967	.014	.186
Q32	.145	.856	.724	.018	.113	.102	.763	.722		.000	.958	.548
Q33	.518	.222	.788	.105	.456	.478	.175	.967	.000		.721	.337
Q34	.123	.684	.878	.353	.683	.941	.455	.014	.958	.721		.000
Q35	.217	.565	.513	.427	.193	.725	.855	.186	.548	.337	.000	
Q36	.435	.601	.256	.900	.421	.964	.621	.669	.431	.266	.461	.064
Q37	.694	.117	.828	.767	.818	.885	.741	.678	.465	.092	.084	.002
Q38	.281	.947	.136	.158	.567	.656	.257	.458	.029	.003	.539	.945
Q39	.729	.179	.576	.034	.700	.845	.498	.816	.758	.369	.867	.136
Q40	.881	.015	.830	.794	.301	.941	.530	.747	.097	.148	.455	.908
Q41	.136	.325	.579	.410	.578	.790	1.000	.660	.879	.660	.617	.581
Q42	.001	.032	.021	.223	.163	.670	.894	.749	.700	.976	.401	.914
Q43	.042	.274	.305	.537	.126	.055	.118	.548	.403	.417	.814	.925
Q44	.205	.663	.257	.477	.170	.394	.765	.253	.971	.462	.500	.057
Q45	.712	.073	.020	.601	.338	.063	.620	.463	.368	.276	.759	.902
Q46	.702	.842	.160	.067	.419	.057	.978	.762	.078	.037	.712	.382
Q47	.007	.417	.563	.006	.031	.880	.726	.923	.917	.357	.633	.014
Q48	.784	.883	.057	.278	.626	.899	.969	.091	.072	.234	.846	.919
Q49	.797	.898	.357	.773	.941	.159	.696	.365	.157	.088	.368	.580
Q50	.025	.564	.066	.868	.797	.358	.782	.194	.016	.149	.583	.544
Q51	.216	.833	.512	.886	.828	.946	.159	.967	.288	.512	.595	.123
Q52	.570	.959	.333	.454	.281	.133	.245	.311	.005	.056	.395	.615
Q53												
N	98	97	98	98	98	98	98	98	97	97	98	98
Q1	98	97	98	98	98	98	98	98	97	97	98	98
Q2	98	97	98	98	98	98	98	98	97	97	98	98

Correlations

	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36
N												
Q3	98	97	98	98	98	98	98	98	97	97	98	98
Q4	98	97	98	98	98	98	98	98	97	97	98	98
Q5	98	97	98	98	98	98	98	98	97	97	98	98
Q6	98	97	98	98	98	98	98	98	97	97	98	98
Q7	98	97	98	98	98	98	98	98	97	97	98	98
Q8	98	97	98	98	98	98	98	98	97	97	98	98
Q9	98	97	98	98	98	98	98	98	97	97	98	98
Q10	98	97	98	98	98	98	98	98	97	97	98	98
Q11	98	97	98	98	98	98	98	98	97	97	98	98
Q12	98	97	98	98	98	98	98	98	97	97	98	98
Q13	98	97	98	98	98	98	98	98	97	97	98	98
Q14	98	97	98	98	98	98	98	98	97	97	98	98
Q15	98	97	98	98	98	98	98	98	97	97	98	98
Q16	98	97	98	98	98	98	98	98	97	97	98	98
Q17	98	97	98	98	98	98	98	98	97	97	98	98
Q18	96	95	96	96	96	96	96	96	95	95	96	96
Q19	96	95	96	96	96	96	96	96	95	95	96	96
Q20	96	95	96	96	96	96	96	96	95	95	96	96
Q21	96	95	96	96	96	96	96	96	95	95	96	96
Q22	96	95	96	96	96	96	96	96	95	95	96	96
Q23	96	95	96	96	96	96	96	96	95	95	96	96
Q24	98	97	98	98	98	98	98	98	97	97	98	98
Q25	98	97	98	98	98	98	98	98	97	97	98	98
Q26	97	97	97	97	97	97	97	97	96	96	97	97
Q27	98	97	98	98	98	98	98	98	97	97	98	98
Q28	98	97	98	98	98	98	98	98	97	97	98	98
Q29	98	97	98	98	98	98	98	98	97	97	98	98
Q30	98	97	98	98	98	98	98	98	97	97	98	98
Q31	98	97	98	98	98	98	98	98	97	97	98	98
Q32	98	97	98	98	98	98	98	98	97	97	98	98
Q33	97	96	97	97	97	97	97	97	96	96	97	97
Q34	97	96	97	97	97	97	97	97	96	96	97	97
Q35	98	97	98	98	98	98	98	98	97	97	98	98
Q36	98	97	98	98	98	98	98	98	97	97	98	98
Q37	98	97	98	98	98	98	98	98	97	97	98	98
Q38	98	97	98	98	98	98	98	98	97	97	98	98

Correlations

	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36
N												
Q39	98	97	98	98	98	98	98	98	97	97	96	98
Q40	98	97	98	98	98	98	98	98	97	97	98	98
Q41	97	96	97	97	97	97	97	97	96	96	97	97
Q42	98	97	98	98	98	98	98	98	97	97	98	98
Q43	98	97	98	98	98	98	98	98	97	97	98	98
Q44	98	97	98	98	98	98	98	98	97	97	98	98
Q45	98	97	98	98	98	98	98	98	97	97	98	98
Q46	98	97	98	98	98	98	98	98	97	97	98	98
Q47	98	97	98	98	98	98	98	98	97	97	98	98
Q48	98	97	98	98	98	98	98	98	97	97	98	98
Q49	98	97	98	98	98	98	98	98	97	97	98	98
Q50	98	97	98	98	98	98	98	98	97	97	98	98
Q51	98	97	98	98	98	98	98	98	97	97	98	98
Q52	98	97	98	98	98	98	98	98	97	97	98	98
Q53	98	97	98	98	98	98	98	98	97	97	98	98

Correlations

	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48
Pearson												
Correlation												
Q1	-.004	-.125	-.034	-.347**	-.175	-.172	-.127	.018	-.122	-.152	-.108	-.143
Q2	-.309**	-.244*	-.064	-.043	-.157	-.095	-.115	-.145	-.285**	-.157	.022	.187
Q3	.109	.039	.016	.083	.038	.149	.033	-.121	.164	.050	.097	-.019
Q4	-.019	-.009	.078	-.070	.144	.042	-.103	-.079	.070	-.089	-.109	-.126
Q5	.083	-.009	.137	.035	.154	.097	-.033	-.034	.138	-.143	-.076	-.090
Q6	.139	-.133	-.224*	-.219*	.031	-.043	-.075	-.091	.102	-.215*	.058	-.245*
Q7	.056	-.097	-.044	.093	-.059	.006	-.162	-.109	-.070	-.008	-.058	.012
Q8	.036	.209*	.163	.170	.196	-.024	-.436**	-.249*	.107	.040	-.112	-.062
Q9	.080	.063	.125	.031	.215*	.175	.018	.095	.090	-.124	-.240*	-.227*
Q10	.069	-.175	.112	.012	-.065	-.136	.069	.013	-.047	.059	-.083	.054
Q11	-.109	.026	-.047	.269**	.114	.011	.183	.153	.007	.123	-.217*	.073
Q12	.004	.060	.055	.033	.085	-.007	-.057	-.026	.039	.120	-.118	-.014
Q13	-.062	-.092	-.152	-.013	.153	-.030	.046	.048	-.029	.157	-.202*	-.014
Q14	.058	-.013	-.072	-.155	-.082	-.077	.094	.097	-.024	-.043	.102	.027
Q15	-.013	-.095	-.181	.018	.037	-.054	.066	.068	.026	.146	.107	.019
Q16	.122	-.112	.082	.000	.071	-.103	.127	.081	-.020	.023	-.086	-.072
Q17	.167	.137	.141	.106	.177	.275**	.014	-.145	.302**	.189	.105	-.121
Q18	.002	-.055	-.084	.018	-.118	.070	.060	.062	-.004	-.005	-.029	.275**
Q19	-.049	.079	.120	.130	.095	.185	.169	.113	.049	.283**	-.032	.134
Q20	-.072	-.114	-.088	-.004	-.204*	-.131	-.008	.167	-.080	-.020	-.243*	-.132
Q21	.069	.137	.040	-.063	-.004	.019	-.008	-.161	.173	.180	.135	-.040
Q22	.055	.295**	.180	.043	.102	.065	.078	-.041	.266**	.254*	.113	.146
Q23	.044	.214*	.269**	.083	.163	.036	.137	.071	.231*	.227*	.008	.086
Q24	-.044	.091	.179	.208*	.129	-.109	.106	.089	.235*	-.089	.028	.185
Q25	.080	-.040	.110	.035	.015	.152	.339**	.206*	.129	-.038	.039	.269**
Q26	.054	-.160	.007	.138	.247*	-.101	.218*	.112	.045	-.183	.020	.083
Q27	-.116	.022	.151	.057	-.022	-.057	.233*	.105	.116	.235*	.143	.059
Q28	-.013	-.030	.144	.214*	-.027	-.084	.124	.063	.073	.054	.185	.277**
Q29	.082	-.024	.059	-.039	-.106	-.057	.142	.156	.140	-.098	.083	.219*
Q30	-.005	.015	.046	-.020	.008	-.027	-.044	-.194	.087	.189	.193	.015
Q31	-.051	-.034	.116	.069	.064	.000	.014	-.159	.031	-.051	.003	.036
Q32	-.044	-.043	.076	.024	.033	.045	.033	-.061	.117	-.075	-.031	-.010
Q33	.081	-.075	-.222*	-.032	-.170	-.016	-.040	-.086	.004	.092	.180	.011
Q34	.114	-.172	-.300**	-.092	-.149	.045	-.003	-.083	.076	.112	.212*	.094
Q35	-.075	.176	.063	-.017	.077	.051	.086	.024	.069	-.031	.038	-.049
Q36	-.188	-.308**	.007	.152	.012	-.056	.011	-.010	-.193	.013	-.089	.248*

Correlations

	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48
Pearson	1.000	.276**	.123	-.042	.040	.164	.069	.071	.472**	.031	.194	-.071
Correlation	.276**	1.000	.480**	.231*	.244*	.062	.043	.074	.530**	.042	.039	.085
	.123	.480**	1.000	.285**	.236**	.046	-.007	.176	.303**	.030	-.048	.139
	-.042	.231*	.285**	1.000	.470**	.062	.148	.153	.095	.033	-.127	.258*
	.040	.244*	.236**	.470**	1.000	.165	.129	.128	.257*	.027	-.046	.005
	.164	.062	.046	.062	.165	1.000	.213*	.131	.185	.117	-.063	-.128
	.069	.043	-.007	.148	.129	.213*	1.000	.708**	.101	.260**	.091	.198
	.071	.074	.176	.153	.128	.131	.708**	1.000	.028	.041	-.055	.112
	.472**	.530**	.303**	.095	.257*	.185	.101	.028	1.000	.123	.151	.142
	.031	.042	.030	.033	.027	.117	.260**	.041	.123	1.000	.218*	.274**
	.194	.039	-.048	-.127	-.046	-.063	.091	-.055	.151	.218*	1.000	.139
	-.071	.085	.139	.258*	.005	-.128	.198	.112	.142	.274**	.139	1.000
	-.185	-.007	.143	.158	.282**	.191	.266**	.257*	-.039	.274**	-.182	.138
	-.020	.091	.499**	.272**	.134	-.104	.269**	.375**	-.007	.235*	-.129	.139
	.037	.077	.160	.077	.167	.101	.290**	.171	.117	.417**	-.059	.184
	.126	.093	.141	-.013	.147	.117	.166	.139	.145	.324**	.186	.010
	.019	.151	.414**	.286**	.134	-.122	.172	.281**	.115	.128	-.093	.121
Sig.	.967	.220	.739	.000	.087	.090	.214	.863	.231	.135	.290	.159
(2-tailed)	.002	.015	.533	.677	.124	.352	.259	.154	.004	.123	.829	.065
	.283	.700	.877	.419	.708	.144	.749	.236	.107	.624	.341	.851
	.849	.933	.445	.493	.159	.681	.313	.442	.493	.382	.286	.218
	.417	.930	.178	.735	.131	.340	.746	.739	.176	.159	.457	.381
	.173	.192	.027	.031	.765	.675	.464	.375	.316	.033	.568	.015
	.586	.344	.664	.364	.563	.955	.111	.285	.491	.934	.572	.907
	.723	.039	.109	.095	.055	.818	.000	.013	.296	.697	.272	.543
	.435	.535	.221	.765	.034	.085	.857	.350	.376	.222	.017	.025
	.502	.084	.272	.909	.530	.180	.499	.900	.646	.561	.417	.595
	.285	.800	.644	.007	.268	.918	.071	.132	.946	.228	.032	.474
	.969	.555	.591	.747	.406	.949	.576	.798	.701	.240	.246	.894
	.545	.366	.135	.895	.135	.769	.651	.641	.777	.123	.046	.892
	.570	.902	.480	.128	.424	.453	.356	.341	.815	.676	.318	.795
	.898	.352	.075	.860	.719	.599	.519	.506	.796	.151	.297	.855
	.230	.274	.424	1.000	.489	.312	.214	.427	.842	.822	.401	.483
	.100	.179	.166	.297	.083	.006	.894	.154	.003	.062	.302	.236
	.983	.596	.414	.864	.256	.497	.560	.548	.966	.960	.776	.007
	.635	.445	.244	.206	.361	.071	.100	.275	.633	.005	.755	.192

Correlations

	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48
Sig. (2-tailed)	.484	.267	.396	.970	.047	.204	.939	.104	.438	.843	.017	.200
Q20	.505	.182	.702	.545	.972	.852	.939	.116	.091	.080	.190	.700
Q21	.597	.004	.079	.675	.326	.530	.449	.693	.009	.012	.271	.156
Q22	.673	.037	.008	.420	.115	.727	.182	.491	.024	.026	.940	.404
Q23	.666	.375	.078	.040	.210	.285	.300	.385	.020	.382	.787	.068
Q24	.435	.694	.281	.729	.881	.136	.001	.042	.205	.712	.702	.007
Q25	.601	.117	.947	.179	.015	.325	.032	.274	.663	.073	.842	.417
Q26	.256	.828	.136	.576	.830	.579	.021	.305	.257	.020	.160	.563
Q27	.900	.767	.158	.034	.794	.410	.223	.537	.477	.601	.067	.006
Q28	.421	.818	.567	.700	.301	.578	.163	.126	.170	.338	.419	.031
Q29	.964	.885	.656	.845	.941	.790	.670	.055	.394	.063	.057	.880
Q30	.621	.741	.257	.498	.530	1.000	.894	.118	.765	.620	.978	.726
Q31	.669	.678	.458	.816	.747	.660	.749	.548	.253	.463	.762	.923
Q32	.431	.465	.029	.758	.097	.879	.700	.403	.971	.368	.078	.917
Q33	.266	.092	.003	.369	.148	.660	.976	.417	.462	.276	.037	.357
Q34	.461	.084	.539	.867	.455	.617	.401	.814	.500	.759	.712	.633
Q35	.064	.002	.945	.136	.908	.581	.914	.925	.057	.902	.382	.014
Q36	.006	.006	.226	.683	.695	.106	.498	.485	.000	.765	.056	.489
Q37	.226	.000	.000	.022	.016	.544	.677	.467	.000	.682	.703	.406
Q38	.683	.022	.004	.000	.020	.655	.943	.083	.002	.771	.641	.171
Q39	.695	.016	.020	.000	.000	.544	.146	.133	.353	.746	.212	.010
Q40	.106	.544	.655	.544	.106	.106	.209	.212	.011	.792	.652	.957
Q41	.498	.677	.943	.146	.209	.035	.035	.199	.068	.250	.537	.209
Q42	.465	.467	.083	.133	.212	.199	.000	.000	.322	.010	.372	.051
Q43	.000	.000	.002	.353	.011	.068	.322	.784	.764	.690	.589	.274
Q44	.765	.682	.771	.746	.792	.250	.010	.690	.229	.229	.136	.163
Q45	.056	.703	.641	.212	.652	.537	.372	.589	.136	.031	.031	.006
Q46	.489	.406	.171	.010	.957	.209	.051	.274	.163	.006	.172	.172
Q47	.069	.944	.160	.119	.005	.059	.008	.011	.705	.006	.073	.177
Q48	.846	.373	.000	.007	.192	.308	.007	.000	.945	.020	.205	.173
Q49	.716	.451	.115	.454	.102	.321	.004	.091	.250	.000	.564	.069
Q50	.215	.360	.167	.899	.151	.251	.102	.172	.155	.001	.066	.922
Q51	.855	.137	.000	.004	.192	.233	.090	.005	.258	.211	.365	.235
Q52	.98	.98	.98	.98	.97	.98	.98	.98	.98	.98	.98	.98
Q53	.98	.98	.98	.98	.97	.98	.98	.98	.98	.98	.98	.98
N	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12

Correlations

	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48
N												
Q3	98	96	98	98	97	98	98	98	98	98	96	98
Q4	98	98	98	98	97	98	98	98	98	98	98	98
Q5	98	98	98	98	97	98	98	98	98	98	98	98
Q6	98	98	98	98	97	98	98	98	98	98	98	98
Q7	98	98	98	98	97	98	98	98	98	98	98	98
Q8	98	98	98	98	97	98	98	98	98	98	98	98
Q9	98	98	98	98	97	98	98	98	98	98	98	98
Q10	98	98	98	98	97	98	98	98	98	98	98	98
Q11	98	98	98	98	97	98	98	98	98	98	98	98
Q12	98	98	98	98	97	98	98	98	98	98	98	98
Q13	98	98	98	98	97	98	98	98	98	98	98	98
Q14	98	98	98	98	97	98	98	98	98	98	98	98
Q15	98	98	98	98	97	98	98	98	98	98	98	98
Q16	98	98	98	98	97	98	98	98	98	98	98	98
Q17	98	98	98	98	97	98	98	98	98	98	98	98
Q18	96	96	96	96	95	96	96	96	96	96	96	96
Q19	96	96	96	96	95	96	96	96	96	96	96	96
Q20	96	96	96	96	95	96	96	96	96	96	96	96
Q21	96	96	96	96	95	96	96	96	96	96	96	96
Q22	96	96	96	96	95	96	96	96	96	96	96	96
Q23	96	96	96	96	95	96	96	96	96	96	96	96
Q24	98	98	98	98	97	98	98	98	98	98	98	98
Q25	98	98	98	98	97	98	98	98	98	98	98	98
Q26	97	97	97	97	96	97	97	97	97	97	97	97
Q27	98	98	98	98	97	98	98	98	98	98	98	98
Q28	98	98	98	98	97	98	98	98	98	98	98	98
Q29	98	98	98	98	97	98	98	98	98	98	98	98
Q30	98	98	98	98	97	98	98	98	98	98	98	98
Q31	98	98	98	98	97	98	98	98	98	98	98	98
Q32	98	98	98	98	97	98	98	98	98	98	98	98
Q33	97	97	97	97	96	97	97	97	97	97	97	97
Q34	97	97	97	97	96	97	97	97	97	97	97	97
Q35	98	98	98	98	97	98	98	98	98	98	98	98
Q36	98	98	98	98	97	98	98	98	98	98	98	98
Q37	98	98	98	98	97	98	98	98	98	98	98	98
Q38	98	98	98	98	97	98	98	98	98	98	98	98

Correlations

	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48
N												
Q39	98	98	98	98	97	98	98	98	98	98	98	98
Q40	98	98	98	98	97	98	98	98	98	98	98	98
Q41	97	97	97	97	97	97	97	97	97	97	97	97
Q42	98	98	98	98	98	98	98	98	98	98	98	98
Q43	98	98	98	98	97	98	98	98	98	98	98	98
Q44	98	98	98	98	97	98	98	98	98	98	98	98
Q45	98	98	98	98	97	98	98	98	98	98	98	98
Q46	98	98	98	98	97	98	98	98	98	98	98	98
Q47	98	98	98	98	97	98	98	98	98	98	98	98
Q48	98	98	98	98	97	98	98	98	98	98	98	98
Q49	98	98	98	98	97	98	98	98	98	98	98	98
Q50	98	98	98	98	97	98	98	98	98	98	98	98
Q51	98	98	98	98	97	98	98	98	98	98	98	98
Q52	98	98	98	98	97	98	98	98	98	98	98	98
Q53	98	98	98	98	97	98	98	98	98	98	98	98

Correlations

	Q49	Q50	Q51	Q52	Q53
Pearson					
Correlation					
Q1	-.292**	-.160	-.113	-.154	-.142
Q2	.054	-.056	-.169	-.266**	-.120
Q3	.124	.049	.116	-.098	-.024
Q4	-.097	-.059	.003	.082	.093
Q5	.105	.007	.113	.008	.128
Q6	-.169	-.194	-.051	.042	-.169
Q7	.093	.011	-.095	-.062	-.011
Q8	-.052	-.058	.095	.191	.090
Q9	.025	.096	-.046	-.013	.194
Q10	.030	.093	.105	-.022	.091
Q11	.170	.166	.191	.066	.095
Q12	.011	.070	.145	.061	.135
Q13	.243*	.165	.110	-.097	.000
Q14	-.053	-.023	-.137	.003	-.144
Q15	.064	-.062	-.044	.002	-.052
Q16	.124	.211*	.113	.204*	.088
Q17	.054	-.001	.104	.327**	.081
Q18	.159	-.020	.075	.029	-.103
Q19	.154	.074	.130	-.031	.089
Q20	.039	.171	-.024	-.064	-.014
Q21	.077	.098	.075	.082	.092
Q22	.025	.017	.114	-.028	-.062
Q23	.012	.056	.162	.150	.095
Q24	-.056	.011	.003	.092	.084
Q25	-.028	.026	.226*	.126	-.058
Q26	.015	-.013	-.059	.022	.005
Q27	.193	.094	.187	.067	.099
Q28	.111	.030	-.017	-.015	.076
Q29	-.050	.008	-.026	-.022	-.110
Q30	-.013	-.144	-.094	.007	-.153
Q31	-.004	.040	-.028	-.143	-.119
Q32	.172	.093	.132	.004	-.103
Q33	-.183	-.145	-.245*	-.109	-.284**
Q34	-.122	-.174	-.148	-.067	-.195
Q35	-.020	-.092	-.056	.054	-.087
Q36	-.010	.057	.062	-.157	.051

Correlations

	Q49	Q50	Q51	Q52	Q53
Pearson Correlation					
Q37	-.185	-.020	.037	.126	.019
Q38	-.007	.091	.077	.093	.151
Q39	.143	.499**	.160	.141	.414**
Q40	.158	.272**	.077	-.013	.286**
Q41	.282**	.134	.167	.147	.134
Q42	.191	-.104	.101	.117	-.122
Q43	.266**	.269**	.290**	.166	.172
Q44	.257*	.375**	.171	.139	.281**
Q45	-.039	-.007	.117	.145	.115
Q46	.274**	.235*	.417**	.324**	.128
Q47	-.182	-.129	-.059	.186	-.093
Q48	.138	.139	.184	.010	.121
Q49	1.000	.443**	.435**	.250*	.267**
Q50	.443**	1.000	.401**	.280**	.660**
Q51	.435**	.401**	1.000	.383**	.363**
Q52	.250*	.280**	.383**	1.000	.398**
Q53	.267**	.660**	.363**	.398**	1.000
Sig. (2-tailed)					
Q1	.004	.116	.267	.129	.164
Q2	.598	.585	.095	.008	.238
Q3	.222	.631	.254	.335	.814
Q4	.342	.562	.977	.421	.364
Q5	.303	.943	.267	.939	.208
Q6	.096	.055	.620	.682	.096
Q7	.363	.915	.354	.546	.915
Q8	.613	.569	.350	.060	.380
Q9	.807	.345	.654	.895	.055
Q10	.769	.364	.303	.829	.374
Q11	.094	.103	.060	.516	.352
Q12	.911	.495	.154	.553	.187
Q13	.016	.104	.281	.344	.997
Q14	.601	.822	.179	.979	.158
Q15	.528	.541	.666	.985	.613
Q16	.224	.037	.267	.043	.389
Q17	.598	.991	.307	.001	.428
Q18	.123	.847	.468	.776	.317
Q19	.135	.473	.208	.763	.388

Correlations

	Q49	Q50	Q51	Q52	Q53
Sig. (2-tailed)					
Q20	.706	.096	.815	.536	.893
Q21	.458	.342	.470	.425	.373
Q22	.805	.871	.271	.785	.547
Q23	.907	.585	.115	.143	.358
Q24	.582	.917	.974	.366	.413
Q25	.784	.797	.025	.216	.570
Q26	.883	.898	.564	.833	.959
Q27	.057	.357	.066	.512	.333
Q28	.278	.773	.868	.886	.454
Q29	.626	.941	.797	.828	.281
Q30	.899	.159	.358	.946	.133
Q31	.969	.696	.782	.159	.245
Q32	.091	.365	.194	.967	.311
Q33	.072	.157	.016	.288	.005
Q34	.234	.088	.149	.512	.056
Q35	.846	.368	.583	.595	.395
Q36	.919	.580	.544	.123	.615
Q37	.069	.846	.716	.215	.855
Q38	.944	.373	.451	.360	.137
Q39	.160	.000	.115	.167	.000
Q40	.119	.007	.454	.899	.004
Q41	.005	.192	.102	.151	.192
Q42	.059	.308	.321	.251	.233
Q43	.008	.007	.004	.102	.090
Q44	.011	.000	.091	.172	.005
Q45	.705	.945	.250	.155	.258
Q46	.006	.020	.000	.001	.211
Q47	.073	.205	.564	.066	.365
Q48	.177	.173	.069	.922	.235
Q49		.000	.000	.013	.008
Q50	.000		.000	.005	.000
Q51	.000	.000		.000	.000
Q52	.013	.005	.000		.000
Q53	.008	.000	.000	.000	
N	98	98	98	98	98
Q1	98	98	98	98	98
Q2	98	98	98	98	98

Correlations

	Q49	Q50	Q51	Q52	Q53
N					
Q3	98	98	98	98	98
Q4	98	98	98	98	98
Q5	98	98	98	98	98
Q6	98	98	98	98	98
Q7	98	98	98	98	98
Q8	98	98	98	98	98
Q9	98	98	98	98	98
Q10	98	98	98	98	98
Q11	98	98	98	98	98
Q12	98	98	98	98	98
Q13	98	98	98	98	98
Q14	98	98	98	98	98
Q15	98	98	98	98	98
Q16	98	98	98	98	98
Q17	98	98	98	98	98
Q18	96	96	96	96	96
Q19	96	96	96	96	96
Q20	96	96	96	96	96
Q21	96	96	96	96	96
Q22	96	96	96	96	96
Q23	96	96	96	96	96
Q24	98	98	98	98	98
Q25	98	98	98	98	98
Q26	97	97	97	97	97
Q27	98	98	98	98	98
Q28	98	98	98	98	98
Q29	98	98	98	98	98
Q30	98	98	98	98	98
Q31	98	98	98	98	98
Q32	98	98	98	98	98
Q33	97	97	97	97	97
Q34	97	97	97	97	97
Q35	98	98	98	98	98
Q36	98	98	98	98	98
Q37	98	98	98	98	98
Q38	98	98	98	98	98

Correlations

N	Q49	Q50	Q51	Q52	Q53
Q39	98	98	98	98	98
Q40	98	98	98	98	98
Q41	97	97	97	97	97
Q42	98	98	98	98	98
Q43	98	98	98	98	98
Q44	98	98	98	98	98
Q45	98	98	98	98	98
Q46	98	98	98	98	98
Q47	98	98	98	98	98
Q48	98	98	98	98	98
Q49	98	98	98	98	98
Q50	98	98	98	98	98
Q51	98	98	98	98	98
Q52	98	98	98	98	98
Q53	98	98	98	98	98

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Data Collection Procedures: Data for Year 1

Goal	Method	Procedure
Obtaining perceptions, attitudes, and behaviors.	<u>Teacher Survey</u>	<ul style="list-style-type: none"> * Administer survey to 1-5th grade teachers on-site to complete and return ASAP. * 8 schools received unabridged version; remaining schools receive abridged version.
Obtaining perceptions, attitudes, and behaviors.	Student Survey	<ul style="list-style-type: none"> * Administer survey to 1-5th grade students at school to complete and turn in.
Obtaining perceptions and attitudes.		
Obtaining information on implementation of initiative, follow up to survey items, and assessing information not obtained via other sources.	<u>Interviews</u>	<ul style="list-style-type: none"> * Identify critical personnel and obtain responses to relevant questions concerning the initiative.
Obtaining information on implementation of initiative, follow up to survey items, and assessing information not obtained via other sources.	<u>Focus Groups</u>	<ul style="list-style-type: none"> * Identify critical groups of personnel and obtain responses to relevant questions concerning the initiative.
Obtain information on student performance and relate it to other variables of interest.	<u>Performance Data</u>	<ul style="list-style-type: none"> * Identify data variables collected by division that can be employed to answer research questions.
Obtaining information on implementation of initiative, follow up to survey items, and assessing information not obtained via other sources.	On-Site Observations	<ul style="list-style-type: none"> * Identify a range of classes to visit and conduct on-site observations of behaviors and interactions.

Methods underlined and in italics represent phases examined in the first year.

Primary Interview Questions

What is the reason you are using technology in your school?

What do you want technology to accomplish?

What is your perception of the role of computer related technologies? Now? 5 years from now? 10 years from now?

Who has the clearest vision of use of technology in the project/school?

Who was involved in the planning?

Can you identify the stages that you went through? What stage are you at now?

What was the biggest barrier to implementation? Facilitator?

Did you review software before using it?

Does your division have a review process, what is it?

What would you do differently?