

INTEGRATING THE USE OF CLASSROOM PERFORMANCE SYSTEMS
IN THE ELEMENTARY CLASSROOM

A Paper

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CHAPTER 1

INTRODUCTION

In the 2004-2005 school year, the Wichita Public Schools USD 259 school district in Wichita, Kansas, successfully completed their first ever district-wide common assessment using the RF (radio frequency) classroom performance system with middle school math classes. In January and February of that same school year, Course I and Pre-Algebra teachers also began using this system to give common assessments. Starting this fall, middle school algebra, middle school language arts, and high school algebra began utilizing the system. Although the USD 259 school district is progressive in providing technology and staff development to staff, it was a big change for students and staff to actually have instant feedback from district common assessments. Prior to this district wide effort, teachers had to be given extra professional time to grade the assessments by hand. Now that more and more teachers have access to classroom performance systems every day in every class, there are possibilities for learning that exceed administering district common assessments.

USD 259 is a large urban school district with an enrollment of 48,865 students. Currently there are moves being made to make classroom performance system use more prevalent at the elementary level. The district started a program called Clicker Master Teachers, where teachers apply, are trained, and become teachers of teachers. The questions I addressed included: (1) what resources and staff development can I provide the staff in the district on classroom performance systems that will help them be prepared for where the district is going? and (2) what are the benefits of implementing the use of classroom performance systems at the elementary level?

CHAPTER 2

ANALYSIS OF RELATED RESEARCH

Introduction

According to Beatty (2004), “Technology doesn’t inherently improve learning: it merely makes possible more effective pedagogy” (p. 8).

More and more educational systems are discovering the benefits of using classroom performance systems as an instructional tool. The topic of this literature review is the use of classroom performance systems. Classroom performance systems go by many names depending on the vendor. A common and kid friendly name for this system is *clickers*. The criteria that I used for this literature review was locating current studies from the years 2001 to present that were not specific to subject or educational level and that may have addressed the use of this type of system at the elementary level. I also looked for articles about the effects of data collection on formative assessments.

Classroom Changes

According to Abrahamson (1999), even Socrates, back more than two thousand years ago, realized that people understand more by answering a question than by being told an answer. Abrahamson (1999) and other physicists created the Classroom Communication System (CCS) technology because they wanted to build a system that would enable teachers to teach interactively even in the normal class sizes that are common today. Their goal was to make the environment more like the one-to-one or one-to-five ratios that would be ideal for the best instruction. Black & William (1998) agree that teaching and learning must be interactive. Ward (2003) stated that the

technology-empowered classroom was over 1000% more interactive than the traditional classroom. These results lay the basis for efforts towards an interactive technology-empowered learning environment (Ward, 2003).

Although successful teaching typically involves interaction, the conventional classroom confronts several limitations such as, time limits and the uneven opportunities for the students to communicate with their teacher (Liu, Liang, Wang, & Chan, 2003). Using a classroom computer alone only supports one-way transmission, rather than two-way interaction between a teacher and students (Liu, Liang, Wang, & Chan, 2003). Teachers also have to manage complicated and demanding situations like channeling the personal, emotional, and social pressures of a group of 30 or more students in order to help them learn immediately and become better learners in the future (Black & Wiliam, 1998).

Standards can be raised only if teachers can tackle this task more effectively. What is missing from the efforts is any direct help with this task (Black & Wiliam, 1998). Teacher turnover and morale have been directly related to increased administrative duties that take away from what teachers are trained to do - teach the students in the classroom (Ward, 2003). Currently, in my 5th grade classroom, I have twenty-six students. Managing the learning of that number of students can be daunting at times. Trying to find out what each individual child knows already about the standards I am required to teach is a time consuming challenge in and of it self. Instructional choices become centered on the time that we have to cover the items before the state test, not about how students will learn the information best.

The basis of most of the learning theory applied in child rearing and in classrooms had its beginnings in behavioral theory (Abrahamson, 1999). Most computer-assisted instruction is solidly planted on this theory, as seen by the emphasis on "drill and practice" techniques (Abrahamson, 1999). The new science was saying that in order to learn something, a student had to organize new information and fit it to what s/he already knew, which is constructivism (Abrahamson, 1999). Beatty (2004) stated that information, answers, and memory have become the focus of class activity and student concern instead of conceptual understanding, process and reasoning. The old way of lecturing, then practicing what was lectured, needs to go by the wayside. Using the classroom performance systems will provide a way for teachers to change what they have traditionally done as educators. The classroom performance system technology is one way of transforming classrooms to be more learner, knowledge, assessment, and community-centered (Roschelle, Penuel, & Abrahamson, 2004).

Abrahamson (1999) stated that good questions asked in the right context have a remarkable propensity to transform a classroom. The transformation could include a lively active environment, students understanding the subject better, students working harder in class, but enjoying it more and even doing more work out of class, and teachers becoming more aware of student problems with the subject matter. This type of questioning can be easily incorporated in the use of a classroom performance system.

Formative Assessment and Data Collection

It is too time consuming for a teacher on his/her own to collect the data that can be collected using classroom performance systems (CPS). Data is collected in reports in CPS as instantly as the tests are administered. That data can then be used to directly

benefit the students in the classroom. Instead of just looking at the right and wrong answers, teachers can teach students to see why they chose certain answers and how to identify those distracters. In other words, teach them to be better test takers.

Assessment refers to all those activities undertaken by teachers -- and by their students in assessing themselves -- that provide information to be used as feedback to modify teaching and learning activities (Black & Wiliam, 1998). Such assessments become formative assessments when the evidence is actually used to adapt the teaching to meet student needs. With formative assessments, in most cases, the transition from topic to topic occurs merely because time has elapsed without feedback to the teacher that the current topic has been mastered (Roschelle, Penuel, & Abrahamson, 2004). Improved formative assessments help lower achievers more than other students and so reduce the range of achievement while raising achievement overall (Black & Wiliam, 1998). When questioning and feedback are frequent and involve students through actively reflecting on what they know and how they learn, and when assessment data are used to inform and adjust the course of instruction, formative assessment can produce large gains (Roschelle, Penuel, & Abrahamson, 2004).

The most important difficulties with assessment revolve around three issues: effective learning, negative impact, and managerial role of assessments. The effective learning issue includes the fact that the tests used by teachers encourage rote and superficial learning even when teachers say they want to develop understanding (Black & Wiliam, 1998). The second issue is negative impact. The giving of marks and the grading function are overemphasized, while the giving of useful advice and the learning

function are underemphasized (Black & Wiliam, 1998). The third issue is the managerial role of assessments. Teachers' feedback to pupils seems to serve social and managerial functions, often at the expense of the learning function (Black & Wiliam, 1998). Often, students receive little feedback before examinations (Roschelle, Penuel, & Abrahamson, 2004). Teachers often predict students' results on external tests based on their own tests that imitate them but at the same time, teachers do not know enough about their students' learning needs. Abrahamson (2004) further states that the collection of grades to fill in grade books is given higher priority than the analysis of students' work to discern learning needs.

Change of Roles

There were many challenges of using performance systems that were pointed out by Beatty (2004). The teacher must learn new skills and adjust to new roles which can be intimidating and demanding. The planning of curriculum changes to being centered around questions and deep comprehension, rather than on lecture notes and content coverage. Class management is also affected because the instructor must solicit and moderate discussion and direct students' attention, spur of the moment. Beatty (2004) also stated that instructors may feel that they are not in as much "control" of the classroom as they might be in a lecture type classroom.

The best way to help instructors adjust to their new roles is to provide mentoring and support by performance system experienced teachers (Beatty, 2004). In a survey of teachers, it was found that training in instructional strategies to use in conjunction with classroom performance systems increased the likelihood that a teacher would be a frequent user, no matter how much training was received (Penuel, Crawford, DeBarger,

Boscardin, Masyn, & Urdan, 2005). This is what the district is hoping to do through their Master Teacher program occurring this spring which will lead to mass staff training during the summer.

Liu (2003) and others found that teachers will then find that classroom performance systems can save time for collecting and grading students' test papers, with each student being enabled to gain feedback and able to respond immediately. Students' performances can then be reserved, statistically summarized, and displayed in different ways. Roschelle, Penuel, & Abrahamson (2004) found that researchers report that instructors use the novel technological capabilities to enhance questioning and feedback, to motivate and monitor the participation of all students, to foster discussions of important concepts, and to energize and activate students' thinking.

Beatty (2004) also suggests that there are also new roles for the students. Students accustomed to doing well may have some initial fear and discomfort because the rules have changed. Others are resentful just because they are less motivated and are now expected to participate more in class. Also, the perception that the delivered questions are mini-tests that they should be able to answer correctly can be misleading, as they are supposed to be learning as they are thinking through the answers (Beatty, 2004). Reported outcomes are greater student engagement, increased understanding of subject matter, increased enjoyment of class, better group interaction, students able to gauge their own understanding, and teachers have a better awareness of student difficulties (Roschelle, Penuel, & Abrahamson, 2004). Penuel, et.al. (2005) found that profiles of teacher characteristics did not have an effect on using the systems with students, including years of teaching or experience with using classroom performance

systems. Teachers who used the system more frequently were more likely to report more benefits of using the system (Penuel, et. al., 2005). An important finding in the survey was that teachers were using classroom performance systems for both assessment and instruction.

Conclusion/ Recommendations

There were some limitations listed in the research articles that were reviewed. Roschelle, Penuel, & Abrahamson (2004) found that research has taken place by researchers in different sub-communities, with little cross-fertilization and synthesis. They (Roschelle, Penuel, & Abrahamson, 2004) also felt that “none of the available studies rose to the present specification of scientifically based research that would allow inferences about causal relationships or that could form a basis for estimating the magnitude of the effect.” The current existing research does not connect with the larger research base in education or psychology. Most studies of classroom performance systems have examined teaching and learning outcomes at the undergraduate level, yet such systems are becoming more widespread in K-12 settings (Penuel, et. al., 2005). Research on classroom performance systems in higher education is focused on science. The survey results suggest that at the K-12 level at least some research should be done to examine the use of such systems in other subjects, such as mathematics and language arts (Penuel, et. al., 2005). Penuel, et. al. (2005) did use a large sample size, but they could not say whether it was a representative sample of teachers. The teachers had volunteered to complete the questionnaire. This study also did not allow them to determine what effects classroom performance system use had on teaching and

learning. These limitations of the research allow for me to continue with my study and give me direction on hopefully filling in the gaps in the literature, if in some small way.

CHAPTER 3

INSTRUCTIONAL DESIGN METHODOLOGY

Analysis

The instructional design method that I chose to follow was the ADDIE model. I chose this model because it suited the needs of my project the best. In the first step of analysis, I conducted a needs assessment. The purpose of the needs assessment was to find out the felt needs and anticipated or future needs of third through fifth grade teachers in USD 259 in regards to assessments and the use of technology. The strategy decided upon was to create an online survey (See Appendix A) of closed questions for the teachers to answer. This survey was hosted on the USD 259 Instructional Technology Department's website.

A search on the Internet was conducted to find sample technology based questions that might work for the survey. Questions were decided upon, and I worked with Cammy Todd in the Instructional Technology Department to fine tune the questions and put them on the website. It was then decided that the best way to get the survey out to the target audience was to use the global address list for all site technology specialists (STS's) to send an e-mail (See Appendix B) asking them to forward the link on to the third through fifth grade teachers in their respective buildings. The sample size included all third through fifth grade teachers at each of the 35 elementary schools in USD 259. Each building has one to four teachers per grade level. Teachers were given eight days to respond to the survey. The survey went out the week before state testing began.

From the data gathered (See Appendix C), it is clear that if the district is planning to go district wide with using classroom performance systems to give district common assessments, funds will need to be provided to get classroom performance systems into buildings. Fifteen of the thirty-five buildings reported not having a single set of classroom performance systems in their buildings. Another point of consideration in this effort is, of the teachers that responded, about half of them preferred to receive technology professional development during district inservice days, and about half of them preferred some form of face-to-face instruction compared to online or another type of medium. The district will need to make it a priority to make time for training on classroom performance system use during inservice days or be willing to pay trainers to make other forms of face-to-face training available to teachers.

In regards to assessment data collection, the results of the survey indicate that the greatest concern is the time that it takes to grade the assessments. Fifty-two percent of respondents indicated that they spend two to four hours per quarter grading district common assessments. Clearly, the district initiating the use of classroom performance systems in the buildings would be a good solution to this problem. In the classroom performance system software, reports are instantly created for the teacher to access.

The technology that is currently being used with students by 80% or more of the respondents included word processing software, games, district provided resources, and the Internet. The types of technology they use already are very similar to the software used with classroom performance systems, so it would lead one to believe that the majority of teachers would be able to use this software with their students. Eighty-

nine percent felt that an increase in student motivation was an impact of using technology with their students. This information may stimulate teachers to be more willing to learn how to use this new software and hardware.

As the teachers reported their own uses of technology, 80% or more of them are using word processing software to make materials to be used with students, using the Internet for resources to use with curriculum, and using district e-mail. Therefore, teachers are currently using the Internet with their students and as a resource for instruction. This indicates that the Internet would be a good place to host classroom performance system resources for teachers to access. It is also highly likely that e-mail would be a productive way to communicate with teachers about those resources. Most teachers are already using software to create things for student use which is the same thing they would be doing with classroom performance systems.

Eighty-five percent of teachers felt that their administrator was involved in technology professional development. That would mean that there would be potential support from administrators for initiating the use of classroom performance systems in the buildings. This support may also lead to possible efforts to raise funds to get the classroom performance systems in the buildings. Based on this data, I would recommend that USD 259 develop a plan of how to acquire more sets of classroom performance systems into all buildings. I would also recommend that a website or Blackboard course be created. This resource should supply users with ready to use classroom performance system resources that are organized by grade level and standard.

Designing and Developing

For my project, the steps of designing and developing in the ADDIE model go hand in hand. The project will be to develop a website as described above. The objective of the website will be to provide teachers with ready made resources that are for use with classroom performance systems. The design of the website needs to be easy to follow with concept-related sequencing. The concept-related sequencing should be broken up first by grade level, then by subject, and finally by standard. The resources should be easy for the teacher to access and download with clear step-by-step instructions. The layout needs to be simple and not distracting to the user. Contact information should also be provided so that teachers can easily and quickly get questions answered. This site will be a place that is fluid. New resources will constantly be added as more teachers in the district share databases they have personally created to use with classroom performance systems.

Implementation and Evaluation

The implementation step of my project will be sharing the website resource with teachers and continually updating the site with new resources provided by teachers. In order to complete the final step of the ADDIE model of evaluation, I will be in communication with teachers to see how the resources are working out for them as a formative tool. I would like to create a survey to be given as a summative tool which I would like to give a year after the site has been made available to teachers.

CHAPTER 4

PROJECT DESCRIPTION

Planning

The project I created is a website (See Appendix D). The website kept with the integrity of USD 259's Instructional Technology Department's website and is hosted as a page within that site. The direct address to the page is <http://technology.usd259.org/resources/clickers/ClickerLessons.htm> . This page is easily accessible to all in the district and can be accessed by those not in the district as well. This was a logical choice, as teachers have one primary place to find technology resources.

I worked with members of the Instructional Technology Department in creating the website. We brainstormed together what should be included on the site while referring to the pros and cons of the SMARTBoard resource page already in place. We decided that it would be best to organize the site by general grade levels of primary, intermediate, middle and secondary and then by subject areas. General grade levels were chosen as opposed to specific grade levels because we felt that sometimes teachers limit themselves if a specific grade level is assigned. By labeling the databases as a general grade level, teachers have a larger range of databases to choose from.

It was also decided that the best way to organize the information on the site would be to place it in a table. The table would include the following information: lesson plan, database, type, and key terms. We decided to include a key terms area because the district is currently looking into a new way to organize their site and make it easier to search. Having these key terms already listed will be a head start on that project. It was

decided that the lesson plan would include the title of the lesson, name of creator, creator's school, grade level, subject area, number of questions, activity type, additional materials/resources and extension activities. The last two items are optional. In the same area as the number of questions a note was added that the questions should be tied to state standards within the database. Since this is something that can be done, it seemed repetitive to also require the creator to list the standards separately in the lesson plan. The initial purpose of the lesson plan was to make it easy for the teacher wanting to use the lesson plan to quickly see what the lesson was about before actually downloading the whole database. A consideration was then made for the lesson plan to be easy for the database creator to fill out and for it not to be a burden. The lessons that will be used to start the website are from the Clicker Master Teachers in the school district.

Software

I was given access to create and update the site through the use of Macromedia Contribute software. Contribute is an easy way to maintain a website. A feature of this software is that it makes it possible for everyone in an organization to publish to a website with up-to-date information. It allows IT administrators a way to easily control, manage and analyze the content being placed on the website. The way that I was able to use it is that I could save what I was working on and then send it for review to later be published onto the site without jeopardizing any other page on the site. FrontPage software is used to develop the whole website.

Maintenance

A folder was designated on USD 259's server for teachers to save the databases to be posted on the website. Its location is <\\learnlab1\Clickers>. Teachers are able to go to this link on any district computer. The folder contains subfolders by general grade level and then by subject area. An e-mail was sent out (See Appendix B) that explained the procedures for saving to this folder. As teachers submit databases, it will be my job to post them appropriately. This website will continue to grow and will be a wonderful resource for teachers in our school district as well as other classroom performance system users.

CHAPTER 5

SUMMARY AND CONCLUSION

This project started with using the ADDIE model to find out the needs of third through fifth grade teachers in regards to assessments and the use of technology. A needs analysis was conducted through an online survey. The results were analyzed and a project was formulated from the results. An immediate answer to what the results showed was the creation of a website. Lots of consideration went into the planning of the website to make sure that it was easy to use. The impact of the website will be felt beyond the third through fifth grade classrooms in USD 259.

There were two questions I had set out to answer at the beginning of my project. The first question was about the resources and staff development that I will be able to provide staff in the district on classroom performance systems. The resource that I have chosen to provide the staff that will best meet their needs is a website to host classroom performance system databases for all to use. I have also shared my findings with leaders in the district to try to provide those key people with the information they need for the types of ongoing staff development that will be required to get more staff members using this technology.

The second question that I set out to address was about the benefits of implementing the use of classroom performance systems at the elementary level. This question was addressed in the initial survey that was given to third through fifth grade teachers in the district. The benefits include students being more motivated to learn and teachers having instant data about their students to provide immediate feedback to their students. This question is not fully answered at the present time. I feel that as the

resources are used on the website and as the district leaders take into account the information provided, the list of the benefits will continue to increase.

In conclusion, there is a need for classroom performance system use at the elementary level and it is beneficial. It is necessary that research be continued on the use of classroom response systems at this level. As the use of classroom performance systems at this level continues to increase, more data will be readily available.

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APPENDIX A
TEACHER SURVEY

Clicker Survey

Directions: Answer each of the questions below:

1. School

Name: 

2. Select your grade level:



3. Is your building Title 1?

- yes
 no

4. How many sets of student response systems (i.e. clickers) are in your building?

- 0
 1-2
 3-4
 5-6
 7 or more

5. What is your primary use of clickers in your classroom?

- District Common Assessments
 Other district or building assessments
 Daily instructional activities
 Other - Please Specify

- I don't use clickers in my classroom

6. Please check all of the technology professional development, offered by the district, with which you have participated.

- STEPs - PBL & Technology

- STEPs - In the Classroom
- STEPs - Professional Practice
- Intel Teach to the Future
- Clicker/SMART Board Master Teacher Training
- Data Academy
- Other - Please Specify

7. How do you prefer to receive technology professional development?

- Online
- Face-to-Face
- Step-by-step video
- Staff development during inservice days
- Other - Please Specify

8. How much time each quarter do you spend grading District Common Assessments (DCAs)?

- 0-2 hour
- 2-4 hours
- 4-5 hours
- More than 5 hours

9. With assessment data in general, what is your biggest concern?

- time to grade
- timeliness in getting results for you to analyze
- timeliness in getting results for student feedback
- Other - Please Specify

10. Please check all of the technologies which you employ with your students.

- Word Processors (e.g. Microsoft Word, Publisher)
- Spreadsheets (e.g. Excel)
- Games (tutorial and basic skills development)
- Special Applications for Reading, Math, etc. (e.g.

Accelerated Reader)

- District provided resources (e.g. Think.com, Kan-Ed)
- Email
- World Wide Web/Internet
- Presentation Software (e.g. PowerPoint)
- CD-Rom Encyclopedias
- Graphing Calculators
- Probes for data acquisition (temperature, mass, etc.)
- Palms
- Student Response Systems (i.e. clickers)
- Interactive Whiteboards
- Other - please specify

11. How has technology impacted your students' achievement? Please check all of the following statements with which you agree.

- Technology increases my students' motivation
- My students use technology to acquire basic skills
- My students use technology to become more critical thinkers
- My students use technology to help them construct new knowledge
- My students use technology to solve relevant, real-life problems.
- My students use technology to discover concepts and prove relationships.
- My students use technology to communicate knowledge and information.

12. The following statements deal with your own use of technology. Please check all of the statements with which you agree.

- I use technology applications (e.g. word processors, spreadsheets) to produce materials for use with my students.
- I use online (www) resources to find materials relevant to my curriculum.
- I use presentation software and hardware within my classroom.

- I use email to contact peers and experts both inside and outside of the district.
- I use email to communicate with parents and students.
- I use technology to maintain student records (e.g. electronic gradebook)
- I use technology to monitor student performance (e.g. electronic portfolios)
- I believe that I can recognize the ethical use of technology
- I model the ethical use of technology with my students.
- My STS has helped me implement district technology standards.
- My STS has assisted me in finding ways to integrate technology within my curriculum.
- District-level technology staff has assisted me in implementing standards and integrating technology.

13. The technology plan for my school is "frequently monitored."

- yes
- no

14. The administrator in my school is involved in technology professional development.

- yes
- no

APPENDIX B
E-MAIL CORRESPONDENCE

3rd, 4th & 5th Grade Teachers-

Wednesday, March 29, 2006

I am currently working on my masters in Instructional Design & Technology. As part of my course requirements, I am working in collaboration with USD 259's Instructional Technology Department to see how student performance systems (clickers) are currently being used (or not used) at the elementary level. (So, even if you have no idea what a clicker is, your response is important to the results!)

Please take a few moments (no more than 5 minutes of your time) to answer a 14 question anonymous survey that can be found at the following address:

http://itd.usd259.org/forms/clickers_elementary.asp

Thank you, in advance, for your time! Responses will be needed by **Friday, April 7th**.

Nicole Thomsen

5th Grade Teacher

Mueller Elementary

Dear Clicker User,

May 7, 2006

There is now going to be a way to share all the hard work that you have put in to creating clicker lessons. I am creating a webpage on the ITD website where staff/teachers can go get lessons that have been created by other staff/teachers in the district.

Please follow these steps in order to share your databases:

1. Make sure that your questions are tied to state standards.
2. Go to START, RUN & type in [\\learnlab1\Clickers](#)
3. Then open the folder for the grade level your database targets and save your database in the folder of the targeted subject area.
4. Make sure that everything that is needed gets put with your database (i.e. graphics, PowerPoints, etc).
5. Also, do not save over someone else's work. If they have saved their database as the same name as yours, you may need to change the name of your database.
6. Fill out the attached USD 259 Clicker Lesson Plan and e-mail it back to me to let me know that you have a database to be added to the website.

If you know of others that have databases to share, please forward this e-mail on to them.

Thanks!

Nicole Thomsen

APPENDIX C
SURVEY RESULTS

General Information			
Number of Elementary Schools in USD 259	35		<i>* There was at least one response from each building.</i>
Total Number of Responses	112		
Total Number of 3 rd Grade Teacher Responses	30	26.8%	
Total Number of 4 th Grade Teacher Responses	39	34.8%	
Total Number of 5 th Grade Teacher Responses	42	37.5%	
Total Number of Schools Receiving Title 1 Funds	20	57.1%	
Sets of Clickers in Buildings			
<i>* Some building responses varied, so either the median or the mode were recorded.</i>			
None	15	42.8%	
1-2 Sets	15	42.8%	
3-6 Sets	5	14.3%	
5-6 Sets	1	2.9%	
Primary Use of Clickers			
None	66	58.9%	
Daily	22	19.6%	
Other Assessments	18	16%	
District Common Assessments (DCAs)	4	3.6%	
District Technology Professional Development Participation			
STEPs 1	31	27.7%	
STEPs 2	21	18.8%	
STEPs 3	15	13.4%	
Intel	17	15.2%	
Master Teacher (Clickers/SMARTBoard)	23	20.5%	
Data Academy	21	18.8%	
Other	27	24.1%	
Preference of Medium for Technology Professional Development			
Staff Development During Inservice Days	50	44.6%	
Face-to-Face	49	43.8%	
Online	8	7.1%	
Other	3	2.7%	<ul style="list-style-type: none"> ▪ Face-to-Face with Computer ▪ Online if not new/ Face-to-Face if totally new

			▪ Combo of Face-to-Face & Online
Step-by-Step Video	1	0.8%	
Time Teacher Spends Grading DCA's Quarterly			
0-2 Hours	23	20.5%	
2-4 Hours	58	51.8%	
4-5 Hours	23	20.5%	
More than 5 Hours	6	5.4%	
Biggest Concern with Assessment Data in General			
<i>*In "Other" there were 5 that responded "all of the above", so 5 were added to each.</i>			
Time to Grade	49	43.8%	
Timeliness in Getting Results to Analyze	33	29.5%	
Timeliness in Getting Results for Student Feedback	25	22.3%	
Other	12	10.7%	<ul style="list-style-type: none"> ▪ Validity ▪ Not like state assessments ▪ Using data to drive instruction ▪ Assessments that are given are not as beneficial as daily work & tests (2) ▪ Testing too often (3) ▪ Alignment to standards ▪ Teaching to the assessment
Types of Technology being used with Students			
Word Processors (e.g. Microsoft Word, Publisher)	96	85.7%	
Spreadsheets (e.g. Excel)	42	37.5%	
Games (tutorial and basic skills development)	98	87.5%	
Special Applications for Reading, Math, etc. (e.g. Accelerated Reader)	79	70.5%	
District provided resources (e.g. Think.com, Kan-Ed)	96	85.7%	
Email	27	24.1%	
World Wide Web/Internet	93	83.9%	
Presentation Software (e.g. PowerPoint)	68	60.7%	
CD-Rom Encyclopedias	33	29.5%	
Graphing Calculators	5	4.5%	
Probes for data acquisition (temperature,	6	5.4%	

mass, etc.)			
Palms	29	25.9%	
Student Response Systems (i.e. clickers)	39	34.8%	
Interactive Whiteboards	77	68.8%	
Other	22	19.6%	<ul style="list-style-type: none"> ▪ Elmo (2) ▪ Lightspan (2)
Perceived Impact of Technology on Student Achievement			
Technology increases my students' motivation	100	89.3%	
My students use technology to acquire basic skills	78	69.6%	
My students use technology to become more critical thinkers	58	51.8%	
My students use technology to help them construct new knowledge	63	56.3%	
My students use technology to solve relevant, real-life problems.	51	45.5%	
My students use technology to discover concepts and prove relationships.	41	36.6%	
My students use technology to communicate knowledge and information.	78	69.6%	
Teacher's Own Use of Technology			
Technology applications (e.g. word processors, spreadsheets) used to produce materials for use with students	105	93.8%	
Use online (www) resources to find materials relevant to curriculum	101	90.2%	
Use presentation software and hardware within classroom	85	75.9%	
Use email to contact peers and experts both inside and outside of the	109	97.3%	

district			
Use email to communicate with parents and students	85	75.9%	
Use technology to maintain student records (e.g. electronic gradebook)	86	76.8%	
Use technology to monitor student performance (e.g. electronic portfolios)	31	27.7%	
Can recognize the ethical use of technology	94	83.9%	
Models the ethical use of technology with students	89	79.5%	
STS has helped implement district technology standards	50	44.6%	
STS has assisted in finding ways to integrate technology within curriculum	60	53.6%	
District-level technology staff has assisted in implementing standards and integrating technology	52	46.4%	
Feels that School's Technology Plan is "Frequently Monitored"			
Yes	70	62.5%	
No	39	34.8%	
Feels that Administrator is Involve in Technology Professional Development			
Yes	95	84.8%	
No	15	13.4%	

APPENDIX D PROJECT

<http://technology.usd259.org/resources/clickers/ClickerLessons.htm>

Clicker Lessons

If you would like to share your databases with others in the district, please send an e-mail to Nicole at nthomsen@usd259.net to receive further instructions.

The type column indicates the CPS activity type(s) within the database: Traditional, Fast Grade, There it is!, Challenge Board or CPS with PowerPoint.

Please note that these files are zipped folders that you will need to save to your computer, then right click on the folder and select extract all from the menu.

Primary (Pre-K-2nd)

Reading			
Lesson Plan	Database	Type	Key Terms
Math			
Lesson Plan	Database	Type	Key Terms
Other			

Intermediate (3rd-5th)

Reading			
Lesson Plan	Database	Type	Key Terms
Charlotte's Web	Charlotte's Web	Traditional, Fast Grade, there it is!, Challenge Board & CPS with PowerPoint	novel, charlotte's web
ESL Sheltered Instruction-Literacy	ESL Sheltered Instruction - Literacy	Traditional, Fast Grade, There it is!, Challenge Board & CPS with PowerPoint	ESL, sheltered instruction, literacy
KSDE Formative Tests - 5th Reading Paper Documents	KSDE Formative Test Builder - 5th Reading	Fast Grade	reading, multiple choice
	Reading Comprehension	Traditional, Fast Grade, There it is!, Challenge Board & CPS with PowerPoint	comprehension
Math			
Lesson Plan	Database	Type	Key Terms
KSDE Formative Tests - 5th Math Paper Documents	KSDE Formative Test Builder - 5th Math	Fast Grade	math, multiple choice