

TECHNOLOGY EVALUATION PLAN
Sioux Falls School District
Sioux Falls, South Dakota

CET 720 - Evaluating Educational Technology Outcomes
Spring 2009

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Evaluation Purpose

The purpose of this evaluation is to provide the Sioux Falls School district, parents, and community with information regarding the district's access and use of technology in the school. The evaluation will review the district's current hardware and software and use that information to update the budget for the following school year to include the new technology needs found in the evaluation. The evaluation will also determine what areas the staff need additional training and professional development in order to be successful in integrating technology in the classroom. And finally the evaluation will determine if and to what extent the technology is contributing to student learning.

Evaluation Audience

The audience for this evaluation includes members of the Sioux Falls School Board, members of the administration, technology committee members, staff members, and members of the community. It is important that all stakeholders affected are addressed as the information will address how technology is being used currently and what the future looks like in terms of technology use in the schools. The stakeholders listed include those that make decisions on what technology will be present in the schools, those that actually implement the use of technology, as well as the members of the community that pay for the technology through taxes.

The audience for this evaluation includes the stakeholders of the Sioux Falls School District and the technology planning committee members, the Sioux Falls School Board, members of the administration, and staff members. It is important that all stakeholders affected are addressed as the information will address what technology is being used currently, what future technology there may be in the schools, and how technology will be implemented in the schools. Others in the audience besides the stakeholders include the students, parents, and members of the community. These members of the audience include those that are directly affected in the classroom by the use of technology, the parental support of the students, and those who help pay for the technology through taxes. The entire audience comprises the educational community that needs to understand exactly how the school district stands in terms of technology.

Description of the Evaluand

- location of the school/district
- type/age of students
- technology infrastructure
- professional development activities
- technology goals

The Sioux Falls School District 49-5 is located in the southeast region of South Dakota in the city of Sioux Falls. The district is the largest in the state with 41 schools, over 20,000 students in kindergarten through twelfth grade, over 1200 full-time classroom teachers. The overall student/teacher ratio is 16:1. Most students live in the urban areas of Sioux Falls but some open enrollment students live outside of the District boundaries. Each year the numbers of enrollment increase; the fall of 2008 population count showed the highest total enrollment ever for the Sioux

Falls School District. The increase in total population is largely due to the number of minority students entering the district. Schools vary in the percentage of students who qualify for free and reduced lunches with an average of 38.6% for elementary, 33.9% for middle school, and 25.2% for high school.

Each school in the Sioux Falls School District have at least one computer lab with the high schools having two or three. Also, each of the schools has at least one wireless mobile lab with two or three in the high schools. The mobile labs usually consist of around 30 laptops that can travel between classrooms at teacher's disposal. The District currently has 8 Building Computer Specialists (BCS) and each BCS supports anywhere from 732 to 970 desktops and laptops. In addition to desktops and laptops the BCSs support interactive white boards, video projectors, scanners, printers, and PDAs. The district also has 4 network support staff that support the district's wireless access, 34 local-area-networks, and 59 file servers.

The professional development goal is to provide targeted and continuous technology related staff development for all employees. Activities include demonstrating technology proficiency, increase use of email system as a communication tool, increase use of mass communication, improve staff knowledge and use of the student management system, increase staff use of software and web applications, and increase staff understanding of ethics & implications in educational Wiki/Blogs/Social Networking sites

The district has really been emphasizing 21st Century Skills and has been integrating that philosophy into the curriculum for the past few years. The Sioux Falls School District wants to infuse technology with the mastery of 21st Century Skills. Three year goals for the district include easy access to teacher resources, increase students' participation in online learning, and increase student interaction with 21st Century tools. Integrating technology with 21st Century skills and tools is a primary goal.

Guiding Evaluation Questions

1. In the past academic year, what numbers of faculty and staff participated in technology professional development and what type of professional development was implemented?
2. How has the technology program influenced reading, math, and science achievement scores?
3. What number of faculty use [daily, weekly monthly] 21st century tools to teach reading, math, and science?
4. In what ways do students feel connected to a global learning environment?
5. How do students feel about their access to 21st Century tools at their school?
6. How do the faculty and staff feel about their access to 21st century tools at their school?
7. How has technology helped maintain effective communication with parents/guardians?
8. What measures does the district take to see to the appropriate use of Internet resources?
9. Does the hardware sufficiently support the learning goals of the school?

Description of Evaluation Approach

The evaluation approach will be both formative and summative. The evaluation will be conducted by internal committee members and will consist of evaluating data from student achievement scores from the Dakota STEP Test. Interviews will be held with teachers, administrators, education assistants, students, and possibly parents/guardians. Surveys will be completed internally by students at various grade levels, the teaching staff, and non-teaching staff to help measure how technology use is affecting the curriculum. Data collected will be used in an attempt to answer the evaluation questions.

METHODS OF DATA COLLECTION AND ANALYSIS

In the beginning of the evaluation process, a series of guiding questions must be asked and explored. The following matrix is intended for the reader to be able to have a framework as they navigate through the evaluation process. This plan of action takes the guiding questions and provides supporting information to address the importance of each question and the information needed to provide answers.

This plan of action also provides an overview of how and when the information will be collected throughout the district and how the data will be analyzed.

Evaluation Questions	Why the Question Is Important	Information Needed to Answer the Question	How and When the Information Will Be Collected	Analysis and Interpretation
1. In the past academic year, what numbers of faculty and staff participated in technology professional development and what type of professional development was implemented?	Professional development helps provide the faculty and staff members with the skills and knowledge necessary to implement technology in a way that positively influences student learning.	Past professional development plans and curriculum, interviews with past professional development speakers, records of staff that attended the professional development meetings	Survey faculty and staff on how many times they have participated in professional development. & catalogue # of participants in each PD event. Have faculty and staff hand in brochure or detailed & descriptive curriculum of each Professional Development event they attended. We hope to see an increase in the mean.	Surveys and catalogue numbers will be counted to come up with the total number of faculty and staff that participated. The survey will also include questions regarding the PD experience. This will reveal what type of PD was implemented. The curriculum will be reviewed to determine what type of professional development was implemented.
2. How has the technology program influenced reading, math, and science achievement scores?	Accountability is an important concept in education. Schools need to be held accountable in where the taxpayers' money is going and if this spending is having a positive effect on the achievement scores of the students.	Achievement scores on DakotaSTEP test in reading, math, and science before technology was integrated and after technology integration; comparing achievement scores of classes integrating technology and classes not integrating technology	Pre-test & post-test scores on state & national achievement tests, then comparing rankings from years when technology wasn't used to teach vs. years it was used to teach. Create initial baseline achievement scores with all other classes. After baseline is created, split classrooms in half with 50% using technology and 50% using no technology. Then compare and contrast achievement scores within the school due to not integrating technology at the end of each semester.	Comparing the scores from the reading, math, and science portions of the post-test with the scores of the pre-test to see if the scores have improved, stayed the same, or decreased will show if technology had some influence, had no influence, or had a negative influence. Comparisons regarding math, science, and reading will also be made between classes implementing technology and those not integrating technology.

Evaluation Questions	Why the Question Is Important	Information Needed to Answer the Question	How and When the Information Will Be Collected	Analysis and Interpretation
3. What number of faculty use [daily, weekly monthly] 21st century tools to teach reading, math, and science?	The number of faculty that are using technology to teach reading, math, and science will help determine what role the incorporation of technology plays in student achievement.	Information on the implementation and frequency of use of 21st Century tools in the classroom, reflections of how often, in what way, and to what extent teachers use 21st Century tools	Survey faculty every quarter at staff meetings via collection of Professional Development attendance information to see if the number of faculty or the amount of use has changed throughout the year, looking for the mean. We want to see if the mean increases over time. Collect reflection logs from faculty and staff quarterly and throughout the academic year. This data will be looked at for quality of content, with a quality index helping to rate each individual experience. It is the hope that with an increase in attendance of PD events, that the quality of content in journals will also increase.	The faculty surveys will include questions on if and how much the faculty member is using 21st century tools to teach reading, math, and science. Reflections will be analyzed and the number of faculty use of 21st century skills in the classroom will be recorded.
4. In what ways do students feel connected to a global learning environment?	The student is the main focus of what takes place in a school. This makes it important that we understand in what ways the students feel connected to technology they are using and that they are comfortable using the technology to effectively perform tasks that are important in an increasingly global learning environment.	Student opinions, views, and feelings about their "connectedness" to the rest of the world using technology, information from students regarding how connected they are to a global learning environment, student attitudes towards global learning	Journals written by students, collected at the end of a term. This data will be looked at for quality of content, with a quality index helping to rate each individual experience to provide quantitative data along with qualitative. Pre-test/post-test open ended survey to create a baseline for information to be compared to and to measure how far participants have come. Individual interviews at the end of term from a random sample group of students help to provide another form of qualitative data.	The journal entries of the students will reveal their feelings of whether or not they are feeling connected to a global learning environment. Student surveys will be analyzed by to determine if the team feels the students are feeling connected. The evaluation team will perform the individual interviews and discuss the responses from the interview, then summarize the findings from the interview to determine a general consensus of whether or not students are feeling connected.

Evaluation Questions	Why the Question Is Important	Information Needed to Answer the Question	How and When the Information Will Be Collected	Analysis and Interpretation
<p>5. How do students feel about their access to 21st Century tools at their school?</p>	<p>The student must feel comfortable and understand how to use the technology they are provided and also how the technology is preparing them with the 21st century skills necessary to be successful in higher education and post graduate careers.</p>	<p>Student views and opinions of their access to 21st Century tools, what types of access to 21st Century tools are available, availability and resources of 21st Century tools, student attitudes towards 21st Century tools</p>	<p>Journals written by students, collected at the end of a term. This data will be looked at for quality of content, with a quality index helping to rate each individual experience to provide quantitative data along with qualitative.</p> <p>Pre-test/post-test 5 point Likert scale survey where students are asked various emotive questions. This will help to get more quantitative data. we hope to show that the more exposure to 21st Century tools the higher the satisfaction level on the survey.</p> <p>Individual interviews at the end of term from a random sample group of students. Provide qualitative data that is useful in providing examples of satisfaction or dissatisfaction, giving students a voice to administration.</p> <p>Teachers will complete the 21st Century checklists for their own classrooms at the end of each term.</p>	<p>Journal entries will be read by the evaluation team and any positive or negative entries regarding their access to 21st century tools will be recorded. The evaluation team will also review the surveys and record the positive and negative responses found in the surveys.</p> <p>The team will then compile a summary report based on the students' feelings revealed in the surveys, journal entries, and interviews. It will account for any positive or negative comments made by the students regarding their access to 21st century tools.</p> <p>The evaluation team will review the summary report and write a final analysis based on the items listed in the summary report stating whether the students feel they have the appropriate access to necessary 21st Century tools.</p>

Evaluation Questions	Why the Question Is Important	Information Needed to Answer the Question	How and When the Information Will Be Collected	Analysis and Interpretation
6. How do the faculty and staff feel about their access to 21st century tools at their school?	Faculty and staff need to feel that they have enough access to technology if they are going to use it to enhance student learning. Faculty and staff may be more willing to learn how to use technology to enhance student learning if they have access to the technology. Access to the technology should be equitable to faculty and staff members at all levels.	Faculty and staff views and opinions about their access to 21st Century tools in the school, what types of access to 21st Century tools are available, availability and resources of 21st Century tools, faculty and staff attitudes towards 21st Century tools.	<p>Focus group of faculty at end of term.</p> <p>5 point Likert scale survey where faculty are asked various emotive questions. This will help to get more quantitative data. we hope to show that the more exposure to 21st Century tools the higher the satisfaction level on the survey given to all faculty at tend of term.</p> <p>Individual interviews at end of term from random sample group of faculty.</p> <p>Checklist of the types of access faculty and staff have access to regarding 21st Century tools will be completed at the end of each term.</p>	<p>Focus groups will concentrate on discussing tools they feel they have adequate access to and tools they feel they are not given enough access to.</p> <p>The evaluation team will provide a summary report revealing the feelings of faculty regarding their access to 21st century tools.</p> <p>The evaluation team will perform interviews to ask the faculty if there are any tools they feel would be beneficial to them that the school does not currently give them access to.</p>
7. How has technology helped maintain effective communication with parents/guardians?	Technology can provide additional avenues of communication between the school and the student's home. This technology can allow there to be an exchange of information about students and can allow for the parents/guardians to be more involved in the education of their child.	Parent/guardian and teacher views and opinions of effectiveness of communication between the schools using technology, parent/guardian and teacher ratings of communication via technology, types of technology used to communicate with parents/guardians, frequency of communication via technology.	<p>Focus group of parent/guardians at end of term.</p> <p>5 point Likert scale survey where parents/guardians are asked various emotive questions. This will help to get more quantitative data. we hope to show that the more faculty use various forms of technology the higher the satisfaction level of parents/guardians as participants in their child's education.</p> <p>Individual interviews at end of term from random sample group of parent/guardians.</p>	<p>Questions about the communication with parents and technology will be asked at the focus groups to get discussions going. Notes will be taken to record the results.</p> <p>The evaluation team will provide reports based on their review the parent surveys.</p> <p>The evaluation team will create a set of questions to be asked to the parents in their interviews. The interviews will be recorded, and the evaluation team will review the interviews and produce a summary report of the findings.</p>

Evaluation Questions	Why the Question Is Important	Information Needed to Answer the Question	How and When the Information Will Be Collected	Analysis and Interpretation
<p>8. What measures does the district take to see to the appropriate use of Internet resources?</p>	<p>There is an abundance of resources available on the Internet that pertains to almost any topic a person could think of. An evaluation must be done in order to determine if these resources are providing information that is credible and accurate.</p>	<p>Determine what proactive measures are taken by the technology coordinator to prevent misuse of Internet resources. Are the appropriate websites being blocked from students and teachers? Are teachers, staff, and students aware of what is an appropriate use of the Internet?</p>	<p>A pre-test, post-test regarding with what regularity inappropriate websites were not blocked by students, staff, and faculty will be administered at the start and end of the semester. A general 5 point Likert scale survey will provide a way to evaluate websites to make sure they are appropriate for use.</p>	<p>The website evaluations will be reviewed by the evaluation team and any websites that are evaluated to have inappropriate content will be added to filtering software to block those websites.</p> <p>The pre-tests and post-tests will be reviewed by the evaluation team to make sure that the software used for blocking websites is actually blocking the majority of websites with inappropriate content.</p>
<p>9. Does the hardware sufficiently support the learning goals of the school?</p>	<p>New technology is constantly being developed and introduced to the education world. It is important that hardware being bought fits into the schools learning goals and that it be made available at all grade levels.</p>	<p>Computer hardware specifications, number of computers per student, the types of technology that are available in each classroom, teacher access to technology and computers, student access to technology and computers, frequency of computer hardware updates and maintenance, and reliability of hardware.</p>	<p>A rating scale test using a 5 point Likert will be created with a single question for each of the specific learning goals of the school.</p>	<p>The ratings for each learning goal will be averaged to determine which learning goals scored poorly on the test. The learning goals that scored poorly will be reviewed more closely and the evaluation team will come up with a set of hardware recommendations to sufficiently meet those goals.</p>

APPENDIX

The appendix contains instruments that are used to gather the information that is discussed in the evaluation questions.

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Hardware Audit

The following list contains the goal and objectives related to hardware. Please mark the appropriate box for each item.

Goal: Provide equitable technology opportunities across the District.			
Objective 1: A computer ratio is established and maintained. Funding will support the ratio.			
	In Place	In Progress	Not in Place
1:1 at the High School			
2:1 at the Middle School			
2:1 at the Elementary Schools			
All classroom and specialty teachers will have a laptop for school use.			
District will follow the purchasing cycle to meet the needs of staff and students with regards to technology integration.			
Objective 2: Peripheral hardware will be purchased to support the hardware/ curriculum needs.			
	In Place	In Progress	Not in Place
Continued upgrade and purchase of peripheral materials			
Explore emerging technologies and implement those which enhance teaching and learning			
Objective 3: Update and upgrade infrastructure each year as necessary.			
	In Place	In Progress	Not in Place
Maintain wireless coverage throughout the District			
Replace and upgrade switches and servers as necessary to support the integration of technology			
Maintain the security of the network throughout the District			
Add adequate bandwidth for the District			
Objective 4: Monitor on a yearly basis the technology support in order to meet the goals and visions of technology.			
	In Place	In Progress	Not in Place
Each building will have a full-time Technology Integrationist.			

Technology Hardware Audit Classroom Checklist

Directions: Please complete the following checklist for your classroom/work area.

Classroom Components:

Teacher Workstation _____
Student Workstation _____
Television _____
VCR/DVD Player _____
Cable connection in classroom _____
Printer (Black)_____ (Color)_____
Scanner _____
Digital Camera _____
Video Recorder _____
Web Cam _____
Smart Board (interactive white board) _____

Teacher and Student WorkStation Configurations:

Operating System _____ WinVista _____ WinXP _____ MacOSX
RAM _____ <1G _____ 1 G _____ >2 G
Hard Drive _____ < 10 Gig _____ 10 Gig _____ > 10 Gig
Microphone _____ External _____ Internal
Video Card _____ Yes _____ No
Speakers _____ External _____ Internal

SOFTWARE EVALUATION FORM

- It is important that any software that is going to be used in the school setting meet certain criteria. This form is to be used to assist in determining how well a particular software program will meet the needs and goals of the school district.

EVALUATOR'S NAME: _____

NAME OF SOFTWARE: _____

I. General Information

Name of Software:	Publisher:
Version:	Copyright Date:
Hardware Requirements: (Make sure to include RAM needed)	
Price: _____ Single User _____ Site License _____ Lab Pack _____ Network License	
Support By Publisher:	

II. Characteristics

Content Area:	Grade Level:		
How many copies will be needed?			
Type of Software: (Circle all that apply)	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center; vertical-align: top;"> Drill and Practice Demonstration Game Problem Solving Reference </td> <td style="width: 33%; text-align: center; vertical-align: top;"> Review Simulation Tutorial Teacher Tool Testing </td> </tr> </table>	Drill and Practice Demonstration Game Problem Solving Reference	Review Simulation Tutorial Teacher Tool Testing
Drill and Practice Demonstration Game Problem Solving Reference	Review Simulation Tutorial Teacher Tool Testing		
How often will you use the software?	_____ Daily _____ At least once a week _____ During a specific unit		

III. Description

Briefly describe the software. Please explain what it does and how it will enhance student learning.
What skills and knowledge does the software require of the user?
What are you teaching now that could be taught with this software?
What new things that aren't being taught now could be taught with this software?
What state standards does the software address?

IV. Comments

Web Site Evaluation

The Internet is a great resource to provide an abundance of information regarding almost any topic a person would want information on. The information is easily accessible; usually requiring just a couple clicks. The problem with using Internet resources is that anyone can post information on the web so you have to make sure the information is credible and accurate. Listed below is a form to help students and educators evaluate a website to determine if it meets credibility and accuracy standards for use in the classroom.

Content	Strongly Disagree	Disagree	Neutral/ Undecided	Agree	Strongly Agree
The website provides useful information on the content area.					
The range of information covered on the content area is complete.					
The website provides links to other resources for additional information.					
The content is presented in an objective unbiased way.					
Credibility/Accuracy	Strongly Disagree	Disagree	Neutral/ Undecided	Agree	Strongly Agree
There is adequate information regarding the author of the website.					
The website lists citations of any resources used.					
The resources used are valid and reputable.					
The information found on this website does not conflict with other credible resources for this content area.					

Edits/Revisions	Strongly Disagree	Disagree	Neutral/ Undecided	Agree	Strongly Agree
The website provides information stating when it was last updated.					
The website was recently updated and will continue to be updated.					
The information on this website is current and up to date.					
Morals/Ethics	Strongly Disagree	Disagree	Neutral/ Undecided	Agree	Strongly Agree
The website does not contain content that could be considered racist, sexist, or fall under any other stereotype.					
The website does not use foul language or slang words.					
The website does not contain adult content.					
The website does not provide advertising for any illegal operations or scams.					
Navigation	Strongly Disagree	Disagree	Neutral/ Undecided	Agree	Strongly Agree
The information on this website is nicely organized and easy to find.					
All the major points on the website are accessible from the first page.					
The website provides quick navigation tools (ie menu, table of contents).					
The website does not contain popups or other disrupting advertisements.					