Educating with Tablet PCs

Request For Proposals

CFP Public Schools

April 2005

*This document outlines the conceptual idea to implement a possible multi-step Tablet PC project into a School System. This RFP is not binding and does not represent any school system directly. CFP Community School District is purely fictitious as are any references to addresses, physical or online, and district personnel. References may be made to CFP Community School District but in no way is this document a bona fide project proposal, nor is a live implementation taking place at any school system.

Table Of Contents

1. Introduction and Submission Procedures

1.1 Purpose

The CFP Community School District is seeking proposals for the implementation and continued support of a program by which each administrator, teacher, and student in grades 3-12 will receive a Tablet PC (tablet) for use at school and home (if they so choose). The project will also include all other necessary equipment and resources to make the system a success including but not limited to: wireless access points, printers, lockable carts, power strips, additional wiring, and Tablet PC training workshops.

Based on the Needs Assessment Survey it appears providing students and staff with new mobile technology will improve staff efficiency and student achievement. Studies show that sufficient access to technology is one factor in the amount of technology being integrated into the curriculum. We feel this project will propel the School District to the forefront of technology integration into the curriculum, and we will set a precedent of what technology can achieve in school systems.

1.2 Submission Information

Submissions are due no later than **5:00 P.M.** Eastern Standard Time on **May 2, 2005**. Submissions received after this time without prior permission from the school district will not be accepted.

Hard Copy Submission:

Submissions must be sent to the following addresses in a sealed envelope clearly marked with the words “PROPOSAL FOR TABLET PROJECT- CPF SCHOOL DISTRICT” containing the following number of copies.

1 copy to:

Attn: Julie Cottin
District Business Office
123 Somewhere Street
Digital, MI 33333

1 copy to:

Attn: Scott Puckett
District Technology Office
125 Somewhere Street
Digital, MI 33333

1 copy to:

Attn: Chad Frerichs
District Curriculum Office
127 Somewhere Street
Digital, MI 33333

Electronic Submission:

Submissions must be emailed to the following address:

Email: tabletpc@cfp.k12.mi.us
Subject: "PROPOSAL FOR TABLET PROJECT- CPF SCHOOL DISTRICT"
Only PDF file format electronically accepted and must be attached.

Submissions must be made in English using common font (Arial, New Times Roman, or Veranda) and no smaller font size than 10.

Submissions must include contact information for all relevant personnel at the submitting company or organization.

The School District reserves the right to reject any and all proposals. The School District also reserves the right to accept any and all proposals in part. Those proposals not adhering to the format and/or meeting all requirements set out in this document will not be considered.

2. Process

2.1 Schedule of Events

RFP Issued: April 11, 2005

Question Deadline: April 30, 2005

Building Tours: April 26 – April 30, 2005 (by appointment)

Final Submission Deadline: May 2, 2005

Oral Presentations: May 16 – May 30, 2005

Contract Awarded: June 15, 2005

2.2 Questions Regarding Proposal

All questions regarding the proposal will be dealt with via an online, threaded discussion board located at

http://cpf.k12.mi.us/tabletdiscussion.asp. The discussion board is password protected, email scott.puckett@cpf.k12.mi.us for password. The school district and its personnel will do their best to answer any questions they are able to. Those questions not answerable by the school district and its personnel will be the responsibility of the vendor(s).

2.3 Building Tour Appointments

Building Tour appointments must be made with Chad Frerichs via the following phone number and/or email address

Phone: 555-555-1234
Email: mailto:cfrerichs@cfp.k12.mi.us.edu

2.4 Oral Presentations

Several selected bids will be required to make oral presentations to the school board and relevant school district personnel. These presentations will take place between the dates of May 16 and May 30, 2005. The purpose of these presentations is for the vendor(s) to further explain and clarify their bid(s). Presentations will be conducted in an open meeting per the Open Meetings Act NMSA 1978, Sections 10-15-1 to 4. Proposals cannot be altered in any way by the vendor(s) during or after the presentation.

2.5 Proposal Format

This section of the document provides the vendors with information on the required format of the bids. Proposals not adhering to this format will not be considered.

2.5.1 Acceptable Media

All proposals must be submitted in a hard-copy format and a digital PDF file. The school district will not accept any other format for this RFP.

Any supplemental materials such as schematics, charts, graphs, photographs, etc. must not be larger than 17” X 22”.

2.5.2 Table of Contents

All proposals must include a table of contents listing page numbers of the various sections and subsections described herein.

2.5.3 Required Sections of Proposals

2.5.3.1 Overview

The overview section of the proposal will include a basic description of the overall scope of the vendor's proposal. The following items must be present.

- Letter of transmittal signed by an authorized representative of the company and/or organization.
- Brief schedule of major milestones to be completed during the duration of the project.
- List of any and all objections to this RFP and detailed alternative solutions.
- Major concerns the vendor may have regarding compatibility issues and/or cost of equipment and detailed alternative solutions.
- An overview of costs broken up into relevant, major categories (i.e. Hardware, Software, Labor, etc.)

2.5.3.2 Bidder Qualifications

This section of the proposal must include the qualifications of the vendor and any and all subcontractors the vendor intends to utilize during completion of this project. A brief history of the company and any and all subcontracting companies the vendor intends to utilize during the completion of this project must also be included in this section.

2.5.3.3 Company Contacts

This section of the proposal must include all contact information for any personnel that will be involved in the completion of this project.

2.5.3.4 Timeline

This section of the proposal should be a detailed timeline of events to occur during this project. Adherence to the proposed timeline will be expected. Procedures for deviation from the timeline must also be presented in this section of the proposal.

Below is the suggested roll out procedures/steps for the Tablet PC implementation.

- Teachers, Principals, and Administrators – 1st Year
- High School Students - 2nd Year

- Middle School Students - 3rd Year
- Elementary - 4th Year

These roll out steps are suggested if resources, training, and/or support would be limited at the School System. Also, it allows for the Teachers, Principals and Administrators to become comfortable with the new technology before offering it to the students. A more aggressive approach to rolling out the technology can take place if funding and support allows.

2.5.3.5 Training of School Personnel

This section of the proposal will detail the proposed training program described in this RFP. This description should include overviews of training methods and individual sessions and costs related to the training portion of this project.

2.5.3.6 Detailed Hardware Description and Pricing

This section of the proposal will include a detailed description of all materials (hardware and software), and labor. This description will provide a detailed summary of all costs involved in the construction and rollout of this project not to include any training. The summary is to be broken down at the discretion of the vendor.

3. Scope Of Work

3.1 Overview

The successful bidder will be expected to provide the following items, services, and upgrades. The goal of this project is to provide each student, teacher, and administrator with a Tablet PC and a school environment that is seamlessly conducive to their use to further student achievement. Every classroom will be included, bidder can provide an exception list with a detailed explanation for the exception and/or alternative solution. The successful bid will focus on providing the environment and training required to better achieve said environment, rather it be technical support training or teacher/administrator training.

3.2 Tablet PCs

The successful bidder will be expected to provide each student, teacher, and administrator with a Tablet PC according to the proposed rollout schedule. The minimum requirements for the Tablet PCs are listed below:

- Intel® Centrino™ mobile technologies or Intel® Pentium® M processor at 1.4 to 1.7GHz or higher
- Intel® 855GME chipset
- Wireless 2100 network connection 802.11b (802.11g preferred)
- 14.1" TFT LCD supporting EMR pen-based input
- Modem port (RJ-11)
- LAN (RJ-45) port
- USB 2.0 ports
- Infrared port
- IEEE 1394 port
- PCI card slot
- 256 MB DDR SDRAM, upgradeable to 2GB
- 30 GB or higher
- Built in DVD/CD-RW combo drive and DVD-Dual drive
- All-day battery life
- Lightweight and portable example: 326x272x33.4/35.9 mm 2.74 kg
- Warranty- 3 year

Other features
- Adequate viewing and writing area
- Satisfactory keyboard
- Port that allows easy desktop setup

3.3 Printers

The successful bidder will be expected to provide and install into each classroom a printer for use with the Tablet PCs and other computers on the school district's network. The minimum requirements for the printers are listed below:

- Laser- Black and White
- Up to 25 ppm
- Resolution: 1200 x 1200 dpi
- Paper Trays: 2 input trays
- Paper input capacity: up to 850 sheets
- Network/wireless connectivity
- Warranty- 3 year

3.4 Data Projectors

The successful bidder will be expected to provide and install into each classroom a data projector for use by teachers and students for presentations, interactive lessons, etc. The minimum requirements for the projectors are listed below:

- Bright 1,500 ANSI Lumens
- Full connectivity including PC (analog and digital)
- Warranty-three years

3.5 Network Upgrade

The successful bidder will be expected to provide the school district with and install a network upgrade to handle the increased wireless load from the added Tablet PCs. This upgrade is to include any servers, routers, repeaters, wireless access points, and cabling. The minimum requirements for the network upgrade are listed below:

- Not more than 20 simultaneous users at one access point. Transmissions within that band conform to the IEEE 802.11 DSSS (Direct Sequence Spread Spectrum) wireless LAN specification.
- Security: Authentication
- Hard wired availability to computer labs and media center
- Administrative and other offices with confidential information hard wired for security reasons.
- Access Points easily accessible for maintenance

3.6 Additional Equipment and Peripherals

The successful bidder will include in their proposal additional equipment and peripherals that may lead to better use of the Tablet PCs and may lead to better student achievement and increased staff productivity. These additions must be clear and a total cost analysis and a detailed benefit analysis must accompany the proposal.

3.7 Software

The successful bidder will be expected to provide with each of the Tablet PCs, but not limited to, a minimum software configuration listed below:

- Microsoft® Windows® XP Tablet PC Edition
- Microsoft Office Suite 2003 including: Word, Excel, PowerPoint, Access, and Publisher
- DreamWeaver
- Web Browser
- Windows Media Player 10.0
- Antiviral Software
- Anti-spam Software

3.8 Storage Carts/Location

The successful bidder will be expected to provide storage carts or a secure location for a minimum of 50% of the student Tablet PCs. This storage must be securable and is to be primarily used as overnight storage for those who do not wish to take their Tablet PCs home. The minimum requirements for these carts are listed below.

- UL-Listed electrical outlets for recharging computers
- Sturdy steel construction
- Conducive environment for storing computer equipment
- Lockable doors with limited access

3.9 Electrical Supply

The successful bidder will be expected to provide and install into all classrooms an adequate electrical supply and outlets to support 30 student Tablet PCs and 1 teacher Tablet PC. The outlets must be in easily accessible, flexible, non-obtrusive positions throughout the classrooms.

3.10 Training

The successful bidder will be expected to provide training solutions for the school district's existing technology support personnel as well as training for teachers and administrators in the general use of the Tablet PCs. All training sessions will include handouts and online tutorials. This training will meet the following minimum goals.

Technical Support Training

- Solutions for implementation challenges unique to the Tablet PC format
- Solutions for challenges involved with the added wireless connectivity
- Security solutions for the Tablet PCs and the added wireless connectivity
- Basic operational techniques for the use of the Tablet PCs

Teacher Training

- Basic operational techniques for the use of the Tablet PCs
- Creative approaches for the use of Tablet PCs in the classroom
- Creative approaches for the use of additional equipment included in the bid in the classroom. (i.e. data projector)
- Alternative solutions for use when the technology fails
- Solutions for increasing teacher productivity

Administrator Training

- Basic operational techniques for the use of the Tablet PCs
- Solutions for increasing administrator productivity
- Creative approaches for the use of the Tablet PCs in the day-to-day administrative use of the Tablet PCs
- An overview of how the Tablet PCs can be used in the classroom to enhance student achievement

4. Performance Objectives

4.1 Best Practices and Effective Learning

The vendors' solutions must support many teaching and learning styles. The solutions must also support current teaching and learning practices. Solutions should detail what they add to the teaching and learning environment and how that enhances student achievement. Solutions should offer extreme flexibility for learning groups.

4.2 Teacher and Student Mobility

Vendor proposals should allow for maximum teacher and student mobility. With the addition of a wireless network, teachers and students should be able to move anywhere in and between classrooms without losing connectivity. Winning bids will also allow for limited, wireless, outdoor access to the network for use during student projects and experiments.

Successful bidders will also allow for maximum teacher mobility while presenting materials via the data projector. Solutions may include gyroscopic mice and wireless keyboards or other I/O devices that allow for such mobility. Multiple classroom arrangements must also be allowed for when designing the data projector portion of the overall proposal.

4.3 Resource Sharing

Successful bids will offer a seamless integration of the Tablet PCs into the existing network. This integration must allow all current resource sharing and any added resources to be shared such as printers, file servers, and scanners.

4.4 Security

Successful bids will offer a comprehensive network security plan. This plan should include policies and settings to be applied to existing network equipment and any new equipment to be installed. Security solutions should offer maximum network security while still allowing easy access to network resources and seamless external and internal network communications such as email and chat.

Bidders must also address security for Tablet PCs that are left at the buildings over night and at other times. These solutions must be easy to use and must not require additional personnel to oversee check-in and checkout.

5. Repair and Replacement Considerations

5.1 Service Level Agreement

Each bidder's proposal should include a Service Level Agreement (SLA). This document should outline the bidder's proposed procedures for servicing and maintaining the new equipment including but not limited to the wireless network, Tablet PCs, and any new servers that may be required. This document should also estimate maintenance costs of the new technologies. The document should also outline procedures for repairing, replacing, and upgrading the new technologies.

5.2 Warranties

The successful bidder will provide the school district with all warranty information pertaining to the new technologies. In addition to the manufacturers' warranties the vendor should offer a separate, 1-year (minimum), warranty of their own.

6. Subcontractors/Models/Brands

6.1 Subcontractors

The use of subcontractors is permitted, but the proposal must identify and outline the responsibilities of any subcontractors to be used. Contact information for relevant personnel must be provided. It will be the responsibility of the successful bidder to handle any and all disputes that may arise with subcontractors they choose to utilize.

6.2 Models and Brands

All equipment and software detailed in the successful proposal will be from reputable manufacturers. All information regarding manufacturer's name, model, warranty, and prices of each item must be provided in the proposal.

6.3 New Technology

All new technology detailed in the successful proposal must be demonstrated and working during Oral Presentations. Additional testing may be required. Any new technology that can not be successfully demonstrated

and tested will not be considered. All information regarding manufacturer's name, model, warranty and prices of each item must be provided in the proposal.

7. Bidders' Requirements

7.1 Insurance

It is the sole responsibility of the successful bidder to acquire and maintain relevant insurance policies while conducting the services outlined in this RFP. The school district and its personnel will accept no responsibility for claims brought by employees of or subcontractors to the successful bidder during the completion of services outlined in this RFP.

7.2 Financial Stability

The successful bidder will provide to the school district ample proof of financial stability and an overwhelming ability to complete the project outlined in this RFP over the proposed rollout period. The school district reserves the right to request additional proof if they deem adequate proof has not been offered.

7.3 Code Requirements

It is the sole responsibility of the bidders to identify and consider any local, state, and federal regulations involved with any and all aspects of the project proposed in this RFP.

8. Other

8.1 Confidentiality of Information

All materials, conversations, emails, discussion board posts, and other communications regarding any aspect of the project proposed in this RFP shall be considered confidential. All bidders will take every step to ensure that these materials, conversations, emails, discussion board posts, and other communications regarding any aspect of the project proposed in this RFP will remain confidential.

8.2 Marketing References

Marketing references implied to the CFP school district by any of the bidders is strictly prohibited until the successful completion of the proposed project. After the successful completion of the project the successful bidder will be allowed to reference the CFP school district and this project only after approval by appropriate personnel from the CFP school district.

8.3 District Information

CFP current District information is provided so the successful bidder can adequately prepare proposal and utilize the current infrastructure when applicable. All District information can be found at: http://cfp.k12.mi.us/cfpinfo and include the following information provided by the CFP Community Schools.

- District Overview including demographic information
- District Layout including maps
- Building layouts
- Current network infrastructure with equipment listing
- Current software licenses

8.4 Needs Assessment

The successful bidder should perform an extensive needs assessment of the stakeholders. Preliminary Needs Assessment was performed. Results and summary are attached in Appendix I.

9. Definitions of Key Terms

DPI: (Dots **P**er **I**nch)

EMR: (**E**lectro **M**agnetic **R**adiation) The emanation of energy from everything in the universe. Although the EMR from electrical and electronic devices is typically measured for practical, every-day situations, every object, including humans, emanates energy. Much of it is at levels our equipment is not sensitive enough to detect.

Gyroscopic: A device consisting of a spinning mass, typically a disk or wheel, mounted on a base so that its axis can turn freely in one or more directions and thereby maintain its orientation regardless of any movement of the base.

IEEE 802.11 or **Wi-Fi:** denotes a set of Wireless LAN standards developed by working group 11 of the IEEE LAN/MAN Standards Committee (IEEE 802). The term is also used to refer to the original 802.11, which is now sometimes called "802.11legacy".

The 802.11 family currently includes six over-the-air modulation techniques that all use the same protocol, the most popular (and prolific) techniques are those defined by the a, b, and g amendments to the original standard; security was originally included, and was later enhanced via the 802.11i amendment. Other standards in the family (c–f, h–j, n) are service enhancement and extensions, or corrections to previous specifications. 802.11b was the first widely accepted wireless networking standard, followed (somewhat counter intuitively) by 802.11a and 802.11g.

LAN: A system that links together electronic office equipment, such as computers and word processors, and forms a network within an office or building.

LCD: liquid-crystal display A type of display used in many portable computers. LCD displays utilize two sheets of polarizing material with a liquid crystal solution between them. An electric current passed through the liquid causes the crystals to align so that light can not pass through them. Each crystal, therefore, is like a shutter, either allowing light to pass through or blocking the light.

Lumen: A unit of measurement of the amount of brightness that comes from a light source. The standard lumen rating of a data projector is the average of photometer readings at several points on a full white image on the screen.

PCI: (**P**eripheral **C**omponent **I**nterconnect) The most common I/O bus in use today. It provides a shared data path between the CPU and peripheral controllers in all kinds of computers from laptops to mainframes. Designed by Intel, Compaq and Digital, it first appeared in PCs in 1993 and co-existed with the ISA bus for many years. Today, most PCs have only PCI slots and one AGP slot for a display adapter.

PPM: (Pages **P**er **M**inute**)** used as a measurement of speed of certain types of printers.

Repeater: electronic device that amplifies a signal before transmitting it again

Router: A device that forwards data packets from one local area network (LAN) or wide area network (WAN) to another. Based on routing tables and routing protocols, routers read the network address in each transmitted frame and make a decision on how to send it based on the most expedient route (traffic load, line costs, speed, bad lines, etc.). Routers work at layer 3 in the protocol stack, whereas bridges and switches work at the layer 2.

Server: A computer system in a network that is shared by multiple users. Servers come in all sizes from x86-based PCs to IBM mainframes. A server may have a keyboard, monitor and mouse directly attached, or one keyboard, monitor and mouse may connect to any number of servers via a KVM switch. Servers may be also be accessed only through a network connection as well.

Tablet PCs: A complete computer contained with a touch screen. Tablet computers can be specialized for only Internet use or be full-blown, general-purpose PCs with all the bells and whistles of a desktop unit. The distinguishing characteristic is the use of the screen as an input device using a stylus or finger. In 2000, Microsoft began to promote a version of Windows XP for tablet computers, branding them "Tablet PCs."

TFT: (**T**hin **F**ilm **T**ransistor) The term typically refers to active matrix screens on laptop computers. Active matrix LCD provides a sharper screen display and broader viewing angle than does passive matrix.

The School District: CFP Community Schools Digital, Michigan, United States of America, a rural community in southwest Michigan.

Threaded Discussion Board: A web-based application that allows for online discussions using a series of topics with messages being posted as replies to each other concerning topic in thread

USB 2.0: (**U**niversal **S**erial **B**us) USB 2.0, widely known as Hi-Speed USB, dramatically increases capacity to 480 Mbits/sec.

Wireless Access Point: A base station in a wireless LAN. Access points are typically stand-alone devices that plug into an Ethernet hub or switch. Like a cellular phone system, users can roam around with their mobile devices and be handed off from one access point to the other.

*All definitions taken from Answers.com at http://www.answers.com and Webopedia http://www.webopedia.com

Appendix I

Initial Needs Assessment Summary

Appendix I
Tablet PC's for students and instructors
Needs Assessment Project

Prepared by:
Julie Cottin
Chad Frerichs
Scott Puckett
EDT 645-Assignment VB
Spring 2005

Needs Assessment Report- Tablet PC

Table of Contents

Julie Cottin
Chad Frerichs
Scott Puckett
Assignment VB

Needs Assessment Report – Tablet PC

Introduction

In our needs assessment we were interested in finding support for a Tablet PC project. Our original idea was to survey stakeholders in a school district that would be interested in a Tablet PC project. In conducting our needs assessment we decided to survey classmates, teachers, parents, and administrators in a k-12 school district and college level on the idea of introducing the Tablet PC into a k-12 school distinct. We were pleased to see results on 40 volunteer surveys.

Survey Results

40 Surveys Total- Survey located online:
http://www.roihunters.com/edt/needs_assessment.asp

45% - Teachers
35% - Parents
22.5% - Business Owners
17.5% - Administrators
7.5% - Students

To highlight some of the groups of volunteers about 45% of the volunteers surveyed were teachers and the larger number being Middle School or 6th through 8th grade. About 35% of the group was parents with students in a K-12 school district, 22.5% of the volunteers were business owners, and 17.5% of the volunteers were administrators at a K-12 district and a couple college level. Please note that some of these groups were a combination of two or more roles; teachers that also owned businesses.

Below, we will highlight some of the responses we got from our questions. The survey contained 22 questions total.

Does your school or school district currently support wireless technology in the school and classroom?

When asked the above question, the majority or about 73% said “yes” and less then 25% were not sure. The finding here answers whether or not a district would be ready to integrate PCs into a high speed Internet network.

Are computers utilized in every classroom at your school or school district?

47.5% stated that they did utilize PCs in every classroom and 20% stated “over 50%” of the classrooms had PCs. This is a good finding in knowing that about half of the surveys showed PC being present in the classroom or the majority of the classrooms.

Does your school or school district offer one or more computer lab(s) for students to use?

An overwhelming 95% stated that they do have computer labs for students. This finding would is to be expected with today's need for students to interact with computers.

When purchasing new hardware technology, which is most important in your decision? Features, Expandability, Compatibility, and Price.

The highest agreed on response was that the "features" of new technology were the most important decision. Compatibility was next in ranking and price was a smaller concert in the results. Knowing this information, emphases can be put on more important items like the features of the product verses the price.

Do you think your schools students and teachers could benefit from using the Tablet PC technology and wireless networking/Internet?

Over 77% agreed to both parts of this question. This creates a great case for introducing the Tablet PC. With all things held constant, there should be very little resistance to implementing the Tablet PC with these results.

What grade levels do you believe would benefit most from the Tablet PC?

The highest-ranking response was for the 9^{th} – 12^{th} grade level of education. When asked if the Tablet PC would help to prepare students for college, 87.5% said "yes". After reviewing these findings above, it could be more beneficial to implement a Tablet PC at the high school level first (if not implementing for the whole district at once).

Do you think funding could be made available in your school district for the Tablet PC and wireless network/Internet?
Could your current IT Staff or Technology Department handle the additional support or be able to expand to support the implementation of the Tablet PC and wireless network/Internet for students and instructors?

When asking the above question, over half were not sure if there would be funding for the Tablet PC and wireless network/Internet. Also, just under half were not sure if their IT staff could support this project. This tells us that there would need to be an investigation on the district's network and staffing before assuming any decisions on this topic.

Do you think that parents or guardians would be willing to pay for a portion of the Tablet PC for their child in school; example $250 dollars (with option of funding for low-income students)?

When asked if the participants thought that parents would be willing to pay a co-pay for the Tablet PCs. Just over 50% stated they were "not sure", 32.5% stated "no", and 15% said "yes". This question may need to be cover by another survey of just parents to find a closer answer. Even though 35% of the participants were parents, we may not be seeing the big picture to this question.

What do you think would be the best option for a student with a Tablet PC? "Option to take home each day", "option for limited sign out (to take home only on special occasions)", and "leave at School at all times to reduce liability and loss".

The larger vote was that the Tablet PCs should be "left at school to reduce liability and loss". This would be a big concern to many schools and should not be a decision taken to lightly.

Do you think a parent or guardian should be willing to sign a liability contract for their child's Tablet PC?

82.5% said “yes” that a parent or guardian should sign a liability contract for their child’s Tablet PC. This states that the majority is concerned with the liability of damaged and broken PCs. This topic would need more focus and may become a bigger topic during this process.

Should students be liable for damaged, lost, or stolen equipment while in their possession?

This question was split right down the center with 50% stating “yes” and the other 50% “only outside of school or intentional damage”. This answers the question that students should be liable for damage, but depending on if it was in school or out of school is split. This question may have been better asked in two different questions to find an answer for in school and out of school liability.

If you were offered Tablet PC training, which method would be most beneficial to you? Classroom lesson, on-line reference materials, training book, and cheat sheet.

The highest response was for a classroom lesson. This tells us that our group is more hands-on and prefers learning in the classroom verses the other options.

Conclusion- The need for further research

It would be wrong to draw significant conclusions from a study so limited in scale. Current use of technology includes regularly using the school network, Microsoft Word, PowerPoint and student management system. From the results, it appears that there is potential need for Tablet PC to be initially introduced to students and instructors in the 9th -12th grades. The assessment survey also provides additional areas of focus and information to gather. One area of concern is the liability issue allowing students to take the Tablet PC home. To fully implement the use of Tablet PC’s with the curriculum the liability issue allowing students to take the Tablet PC home will need to be resolved (unless homework is not required). It is interesting to note that over 50% were not sure if parents/guardians should have to pay a portion of the Tablet PC expense, but over 77% feel a Tablet PC would be beneficial for students and instructors. Classroom training appears to be the most beneficial when introducing Tablet PC’s, which should be considered to improve acceptance and willingness to implement into the curriculum.

References:

See the Tablet PC in action
http://www.microsoft.com/windowsxp/tabletpc/default.asp

Using Windows XP Tablet Edition including How to Articles, Tips and Newsgroups
http://www.microsoft.com/windowsxp/tabletpc/using/default.asp

Explore everything Tablet PC can do
http://www.microsoft.com/windowsxp/tabletpc/evaluation/features.asp

Tablet PC Hardware Comparison
http://www.tabletpctalk.com/faqs/hwcomparison.shtml

Take your files offline with Tablet PC
http://www.microsoft.com/WindowsXP/expertzone/columns/vanwest/03may28offline.asp

Mark up your documents
http://www.microsoft.com/windowsxp/tabletpc/using/howto/documentimages.asp

Education and the Tablet PC
http://www.microsoft.com/education/?ID=TabletPC
http://www.microsoft.com/windowsxp/tabletpc/evaluation/school.asp

Tablet PCs Drop the pen and paper - note-taking has gone digital.
http://www.cdwg.com/webcontent/editorialg/hardware/011503_TabletPCs.asp

A New Take on Tablets
http://www.techlearning.com/story/showArticle.jhtml?articleID=52600730

PC Tablet

TMC112TI-G TABPC PM/1100 512MB 40GB 10.4IN XP TAB

http://www.pagecomputers.com/cgi-bin/page/B1422153.html

General information	
Manufacturer	Acer inc.
Manufacturer part number	Lx.t270e.235
Manufacturer website address	Www.us.acer.com
Product line	Travelmate
Product series	C110
Product name	Travelmate c112ti-g tablet pc
Marketing information	You can use the innovative travelmate
C112ti-g like a clipboard by writing directly on the display with	
The included emr pen or stylus. When you are ready to use the	
Keyboard just flip the display and you have a full-functioned	
Notebook computer. It features intel centrino mobile technology	
Which offers you wireless connectivity standout performance and	
Extended battery life in a compact form factor.	
Processor & chipset	
Processor	Intel pentium m 733 1.10ghz
Bus speed	400mhz fsb
Cache	2mb l2
Chipset	Intel 855gm
Memory	
Standard memory	512mb ddr sdram
Maximum memory	2gb ddr sdram
Memory slots	2 populated0 free
Storage	
Hard drive	40gb ultra ata/100 (ata-6)
Removable storage drives	3.5 1.44mb diskette drive external usb
Optional	
Display & graphics	
Display screen	10.4 xga active matrix tft color lcd
Graphics controller	Intel 855gm up to 64mb dvmt shared integrated
Display resolution	1024 x 768 @ 16.7 million colors (24-bit)
Internal support	
Color support	16.7 million colors (24-bit)
Audio	
Sound card	Integrated
Speakers	Mono speaker integrated
Network & communication	

Network	Intel pro/wireless 2200bg wi-fi ieee 802.11b/g
54mbpsbluetoothfast ethernet 10/100mbps	
Modem	V.92 56kbps fax modem
I/o expansions	
Expansion slots	1 x cardbus type ii
Input devices	
Keyboard	84 keys
Keyboard features	Five-degree curve five launch keys
Four-way internet scroll key inverted t cursor layout	
Embedded numeric keypad	
Pointing device	Tablet pentouchpad
Pointing device features	Touchpad feature: Two mouse buttons
Tablet pen type	
Features	
Interfaces/ports	
Ports	2 x usb 2.01 x dc power input1 x rj-11 modem1 x rj-45
Network1 x vga1 x line-in1 x line-out1 x i.link ieee 1394 firewire1	
X irda fast infrared1 x docking port	
Software	
Operating system	Windows xp tablet pc edition
Software included	Acer launch manager acer notebook manager
Cyberlink powerdvd xp 4.0 nti cd-maker 6 oem version	
Battery information	
Batteries	1 x 4-cell lithium ion (li-ion) standard
Battery life	3 hour(s) approximate (main battery)
Battery recharge time	1.5 hour(s) passive (main battery)3 hour(s)
Active (main battery)	
Power description	
Power supply	External ac adapter
Power consumption	50w
Power management	Acpi 2.0
Physical characteristics	
Dimensions	1.2 height x 10.1 width
Shipping dimensions	14 height x 9 width x 15.25 depth
Weight	3.3 lb
Shipping weight	10.38 lb
Miscellaneous	
Package contents	Travelmate c112ti-g tablet pc tablet pen
Lithium-ion battery ac adapter acer system recovery cd	
Additional information	Built-in devices: Microphone graphics
Technology	
Directsound quality tests	
Acoustics electrostatic discharge immunity hinge life	
Keyboard switch life free drop weight and pressure	
Spill shock and vibration tablet pc tests	
Hinge rotation lcd scratch lcd ripple hook durability	
Security features	User bios password administrator bios password

Kensington lock slot	
Certifications & standards	Microsoft whql dmi 2.0 mobile pc2001
Warranty	
Standard warranty	1 year(s) limited
Parts warranty & labor	1 year(s)
Additional warranty information	Concurrent international travelers
Part Number	B1422153
Mfr. Part #	LX.T270E.235
Price	**$964.52**

Computer Information Systems

HOME

Needs Assessment Survey

This "Needs Assessment Survey" is for a group assignment in Western Michigan University's EDT645 course. Any opinions, questions, and content on this Web site do not reflect the University as an entity or any instructors or employees of the University.

| Index Page | Internet Programming Introduction Lesson | Technical Support and Resources | "Mock" HTML Certificate |

Needs Assessment Survey - Tablet PC

Welcome to Julie Cottin, Chad Frerichs, and Scott Puckett's group project Needs Assessment Survey for EDT 645.

Please read all the information on this page before continuing to the Questions.

Notice

It is very import that you understand that you are filling out this survey as volunteering your opinion on the topic discussed. This survey is considered a "Mock" survey and does not reflect the opinions of any entity except for the three members mentioned above. Your opinions and information will not be used for any profitable gains. Your input will be analyzed and compared to other volunteers for the purpose of education in this assignment.

This assignment outlines the conceptual idea to gain information and opinions on a "Tablet PC" assessment into a school system. This needs assessment does not represent any school system directly. References may be made to schools but not in any way is this document a bona fide needs assessment for a real school, nor is this a live needs assessment taking place at any school system.

Thank you for taking your time to fill out this survey!

If you'd like to learn more about the Tablet PC, please visit the link below.

Tablet PC

Questions

All questions will be followed with choices or a text box.

1. Are you currently associated in any way with a school or school district? (choose all that apply)

☐ Teacher / Instructor, what school level do you work in: _____ ☐ Student, what grade _____

☐ Parent of a Student, what grade(s) 1 ☐ Administrator or staff at a school, what level
☐ Business Owner in school district ☐ Citizen in school district ☐ Other

2. Does your school or school district currently utilize network and high speed Internet?
○ Yes ○ No ○ Network Only ○ Not sure

3. Does your school or school district currently support wireless technology in the school and classroom?
○ Yes ○ No ○ Limited Areas ○ Not sure

4. Are computers utilized in every classroom at your school or school district?
○ Yes ○ No ○ Under 50% ○ Over 50% ○ Not sure

5. Does your school or school district offer one or more computer lab(s) for students to use?
○ Yes ○ No ○ Not sure

6. When purchasing new hardware technology, which is most important in your decision? (Rank in importance 1=most important 6=least important)
Features - Expandability - Compatibility - Price -

7. What uses do you think would be most beneficial in having Tablet PCs in your school or school district? (Rank in importance 1=most important 6=least important)

☐ Computer Usage and Typing Skills
☐ Science Classes and Experiments
☐ Learning about the Internet
☐ Working on Homework
☐ Turning in Homework
☐ Learning Computer Programming
☐ Creating Spreadsheets, Charts, and Graphs
☐ Internet Research
☐ Math Classes
☐ Learning Microsoft Office
☐ Using Email
☐ Creating Presentations
☐ Communicating

8. Do you think your schools students and teachers could benefit from using the Tablet PC technology?
○ Yes ○ No ○ Not sure

9. Do you think students and teachers would benefit from a Tablet PC and wireless network/Internet?
○ Yes ○ No ○ Not sure

10. What grade levels do you believe would benefit most from the Tablet PC? (Rank with 1 = most important)

☐ K – 5th ☐ 6th – 8th ☐ 9th – 12th ☐ All Levels

11. Do you think that Tablet PC usage would be beneficial for students preparing for College?

○ Yes ○ No ○ Not sure

12. Do you think funding could be made available in your school district for the Tablet PC and wireless network/Internet?

○ Yes ○ No ○ Not sure

13. Could your current IT Staff or Technology Department handle the additional support or be able to expand to support the implementation of the Tablet PC and wireless network/Internet for students and instructors?

○ Yes ○ No ○ Not sure

14. Do you think that parents or guardians would be willing to pay for a portion of the Tablet PC for their child in school; example $250 dollars (with option of funding for low-income students)?

○ Yes ○ No ○ Not sure

15. What do you think would be the best option for a student with a Tablet PC? (Rank in importance 1=most important 6=least important)

☐ Option to take home each day

☐ Option for limited sign out (to take home only on special occasions)

☐ Leave at School at all times to reduce liability and lost

16. Do you think a parent or guardian should be willing to sign a liability contract for their child's Tablet PC?

○ Yes ○ No ○ Not sure

17. Should students be liable for damaged, lost, or stolen equipment while in their possession?

○ Yes ○ No ○ Only outside of school or intentional damage ○ Not sure

18. If you were offered Tablet PC training, which method would be most beneficial to you? (Rank in importance 1=most important 6=least important)

☐ Classroom lesson ☐ Training book

☐ On-line reference materials ☐ Cheat sheet

19. Is there another technology that you feel would enhance student learning, more than the Tablet PC with wireless network/Internet? If so, what?

20. Is there other technology (hardware / software) you feel would enhance student learning.

21. What technology currently available at your school should be used more often to enhance student learning and/or management?

22.

Technology Background: Have you used the following technologies?		Frequently	Regularly	Rarely	Never	Would like to learn
Desktop/Workstation		○	○	○	○	○
Notebook or Tablet PC		○	○	○	○	○
PDA	Palm Pilot, I Pac, Visor, etc.	○	○	○	○	○
Digital Music Player	Apple (I Pod), Creative, Dell, Gateway, Rio	○	○	○	○	○
DVD Recorder		○	○	○	○	○
LCD Panel or Computer Projector		○	○	○	○	○
CD-ROM or DVD Production		○	○	○	○	○

Network	Save Files, Print, Share, Applications	○	○	○	○	○

Software Background: Have you used the following software applications? If yes, where and how often?		Frequently	Regularly	Rarely	Never	Would like to learn
Word Processing	Word, WordPerfect, Works	○	○	○	○	○
Spreadsheets	Excel, Lotus	○	○	○	○	○
Databases	Access, SQL, MySQL	○	○	○	○	○
Presentation	PowerPoint, VideoShop	○	○	○	○	○
Computer Interactive	Testing/ Tutorials	○	○	○	○	○
Computer Interactive Games	Educational Games- SIMS, SIMS Life	○	○	○	○	○
Instant Messenger/ Chat	MSN, AOL,, Yahoo MIRC	○	○	○	○	○
Student Management	PowerSchool- Grading/ attendance, Budgets, Records.	○	○	○	○	○

Submit

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	q1teacher	q1teacherlevel	q1student	q1studentgrade	q1parent	q1parentgrade	q1admin	q1adminlevel	q1business	q1citizen	q1other	q2	q3	q4	q5	q6_features	q6_expandability	q6_compatibility	q6_price	q7comp	q7inte	q7scie	q7math	q7learn_int	q7learn_micr
2	Y	college	N		Y	6, 9, 10	N		Y	N	N	yes	yes	over50	yes	1	2	4	3						
3	Y	6_8	N		N		N		N	N	N	yes	yes	yes	yes	1	1	4	4	3	1	1	1	2	3
4	Y	6_8	N		N		N		N	N	N	yes	yes	not_sure	yes	1	1	1	1	1	1	2	3	2	2
5	Y	6_8	N		N		N		N	N	N	yes	yes	over50	yes	4	3	1	2	2	2	2	4	5	2
6	N		N		N		Y	6_8	N	N	N	yes	yes	yes	yes	3	1	3	1	6	1	2	3	6	6
7	Y	6_8	N		N		N		N	N	N	yes	yes	yes	yes	1	4	3	2	3	1	6		4	
8	Y	6_8	N		Y		N		N	N	N	not_sure	yes	over50	no	1	2	3	4	5	3	1	1	2	2
9	Y	6_8	N		N		N		N	N	N	yes	yes	yes	yes	2	4	1	3	2	3	2	2	3	5
10	Y	6_8	N		N		N		N	N	N	yes	yes	yes	yes	1	3	1	3	2	3	4	2	5	2
11	Y	6_8	N		Y		N		N	N	N	yes	yes	over50	yes	3	1	2	4	4	2	5			
12	N		N		N		Y	college	N	Y	N	yes	limited	under50	yes	2	1	1	1	1	1	1	4	1	1
13	N		N		Y	12	N		N	Y	N	yes	yes	yes	yes	1	5	6	1	1	2	2	2	2	1
14	N		N		N		N		Y	Y	N	not_sure	not_sure	not_sure	yes	1	3	3	3	6	1	2	3	1	4
15	N		N		N		Y	9_12	N	N	N	yes	yes	yes	yes	3	4	1	2	1	2	4			
16	N		N		N		Y		N	N	N	yes	yes	yes	yes	2	1	3	4			4	3		
17	Y		N		N		N		N	N	N	yes	yes	yes	yes	2	3	1	4	1	2	4	2	3	1
18	N		N		Y	2	N		Y	Y	N	yes	not_sure	yes	no	1	3	2	3	2	3	2	2	5	3
19	Y	6_8	N		N		N		N	N	N	yes	yes	over50	yes					3	2			4	
20	N		N		N		N		N	Y	N	yes	not_sure	not_sure	yes	1	3	1	2	1				5	
21	N		N		N		N		Y	N	N	not_sure	not_sure	not_sure	yes	1	1	1	1	1	2	3	5	3	3
22	Y	9_12	N		Y	9	N		N	Y	N	yes	yes	yes	yes	1	1	1	1	1	2			3	
23	Y	9_12	N		N		N		N	Y	N	yes	yes	yes	yes	1	3	4	2	1	1	2	2	3	2
24	N		N		Y	12	N		Y	N	N	not_sure	not_sure	yes	yes	1	1	1	6	1	5	3	4	3	3
25	Y	9_12	N		Y		N		N	Y	N	not_sure	yes	yes	yes	3	5	4	2	2	2	2	3	2	4
26	Y	6_8	N		N		Y	6_8	N	N	N	network	yes	yes	yes	3	2	1	1	2	1	2	2	5	3
27	Y	k_5	N		N		N		N	N	N	yes	yes	yes	yes	1	2	3		1	1	4	3	2	3
28	N		N		Y	12	N		N	N	N	yes	not_sure	over50	yes	2	3	4	1	1		3			2
29	N		Y	9	N		N		N	N	N	not_sure	yes	no	yes	3	4	5	3	4	1	2	4	4	3
30	N		N		Y	6, 7	N		N	N	N	not_sure	not_sure	over50	yes	1	4	2	3	1	2			5	3
31	Y	k_5	N		N		Y	k_5	N	N	N	no	no	yes	yes	2	2	2	1	1	1	2	3	1	2
32	N		N		N		N		N	Y	N	not_sure	not_sure	no	yes	1	2	2	2	6	4	4	5	4	6
33	N		N		N		N		Y	Y	N	yes	yes	not_sure	yes	1	2	2	2	1	2	2	3	2	2
34	N		N		N		N		N	Y	N	yes	not_sure	not_sure	yes	2	1	1	3						
35	Y	9_12	N		Y	8	N		N	Y	N	yes	yes	yes	yes	4	3	1	2	6	1	1	2	2	4
36	N		N		N		N		N	Y	N	not_sure	not_sure	not_sure	yes	6	3	1	3	1	1	1	1	1	1
37	N		Y	college	N		Y	college	N	N	N	yes	limited	under50	yes	1	1	2	2	1	1	1	5	1	2
38	N		Y	10	N		N		N	N	N	yes	yes	over50	yes	2	4	1	1	3	1	3	3	2	3
39	N		N		Y	10	N		Y	N	N	yes	not_sure	no	yes	3	1	6	5	6	4	4	3	2	5
40	N		N		Y	9	N		Y	Y	N	yes	not_sure	not_sure	yes	1	5	3	2		1	1	1		
41	N		N		Y	4, 7, 11	N		Y	Y	N	yes	yes	yes	yes	1	3	3	2	1	2	3	4	4	3

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
1	q7work_homework	q7using_email	q7turnin_home	q7create_pres	q7learn_prog	q7commun	q7create_spread	q8	q9	q10_k_5	q10_6_8	q10_9_12	q10_all	q11	q12	q13	q14	q15_take_home	q15_limited	q15_leave_school	q16
2								yes	yes	3	2	1	4	yes	yes	not_sure	yes	1	2	3	yes
3	3	3	3	1	5	3	2	yes	yes	1	1	1	1	yes	not_sure	not_sure	no	6	6	1	yes
4	2	4	2	1	5	1	2	yes	yes	2	1	1	1	yes	not_sure	yes	not_sure	2	1	1	yes
5	4	5	4	1	3	2	2	yes	yes	5	2	1	2	yes	yes	not_sure	yes	3	1	4	yes
6	6	6	6	2	6	3	3	yes	yes		2	1		yes	not_sure	yes	no	3	1	3	not_sure
7	2		5					yes	yes				1	yes	not_sure	not_sure	not_sure	3	1	2	yes
8	5	1	5	3	5	6	3	not_sure	not_sure				3	not_sure	no	no	no	6	5	1	yes
9	5	6	5	3	6	5	3	yes	yes	5	3	1	1	yes	yes	yes	no	6	1	2	yes
10	1	4	1	2	3	4	2	yes	yes					yes	not_sure	not_sure	no	1	2	2	yes
11	6			1			3	yes	yes	3	2	1		yes	not_sure	no	not_sure	3	1	2	yes
12	1	4	2	2	3	4	1	yes	yes	3	2	1	1	yes	not_sure	yes	no	6	3	1	yes
13	1	4	2	1	1	2	1	not_sure	not_sure			1		not_sure	not_sure	not_sure	no	2	5	5	yes
14	5	2	6	3	3	6	2		not_sure	4	3	2		not_sure	not_sure	no	not_sure	6	5	1	yes
15		3		5			6	yes	yes					yes	yes	yes	not_sure	6	3	1	not_sure
16	5	1	6	2				yes	yes				1	yes	yes	yes	not_sure	3	2	1	yes
17	4	1	4	3	6	2	5	yes	yes	3	3	1	3	yes	yes	yes	not_sure	3	2	1	not_sure
18	1	4	3	3	5	5	3	yes	yes	3	2	1	2	yes	not_sure	yes	not_sure	1	2	5	yes
19	5			1				yes	yes				1	yes	not_sure	yes	not_sure	3	2	1	yes
20	2		3	6			4	yes	yes				1	yes	not_sure	not_sure	not_sure	1	2	3	yes
21	5	4	3	3	2	2	1	not_sure	not_sure	3	1	2	1	yes	not_sure	not_sure	not_sure	3	2	1	not_sure
22				3				yes	yes				1	yes	not_sure	no	no	3	1	2	yes
23	2	2	2	1	4	2	2	yes	yes	1	1	1	1	yes	yes	yes	not_sure	2	1	3	yes
24	4	6	6	5	2	5	3	not_sure	not_sure				3	not_sure	not_sure	not_sure	no	6	6	1	yes
25	4	1	5	2	5	1	4	yes	yes	4	3	2	3	yes	yes	yes	yes	4	2	2	yes
26	1	2	2	1	3	2	3	yes	yes	4	2	1	2	yes	not_sure	not_sure	not_sure	3	2	1	not_sure
27	2	2	6	2	6	3	5	yes	yes	3	2	1		yes	yes	yes	not_sure	2	1	3	yes
28			4	5			6	not_sure	not_sure	4	2	3	1	yes	not_sure	yes	not_sure	3	1	2	yes
29	2	5	1	2	3	3	2	not_sure	yes	3	2	1		yes	yes	yes	yes	1	2	2	yes
30	6					4		yes	yes	4	3	2	1	yes	yes	not_sure	no	2	3	1	no
31	2	3	3	1	5	1	1	yes	yes	4	3	1	2	yes	no	no	yes	5	3	1	yes
32	6	4	6	4	4	4	6	yes	yes	3	2	1		yes	yes	not_sure	yes	1	2	3	yes
33	3	2	3	3	4	3	2	yes	yes			1	2	yes	not_sure	not_sure	not_sure	3	2	1	yes
34								not_sure	not_sure					not_sure	no	not_sure	no	6	4	1	yes
35	2	1	6	3	3	2	3	yes	yes				1	yes	yes	not_sure	not_sure		1		yes
36	1	1	1	1	1	1		yes	yes	1	1	1	1	yes	not_sure	no	not_sure	5	3	1	yes
37	2	2	2	2	3	4	1	yes	yes	3	2	1	1	yes	yes	no	no	5	3	1	yes
38	1	2	1	2	2	2	2	yes	yes	5	3	1	2	yes	not_sure	not_sure	not_sure	2	4	6	yes
39	3	5	3	4	2	6	5	not_sure	not_sure					yes	not_sure	yes	not_sure	6	3	2	yes
40	2		1	2			2	yes	yes		2	1		yes	not_sure	not_sure	not_sure	3	1	3	yes
41	4	3	5	2	3	4	2	yes	yes	2	1	1	1	yes	not_sure	not_sure	no	5	5	1	not_sure

	AU	AV	AW	AX	AY	AZ	BA
1	q17	q18_classroom	q18_book	q18_online	q18_cheat_sheet	q19	q20
2	only_outside	1	3	2	4	No, Tablet PC would be wonderful for all students	Software to view students computer in class, forget name, allows instructor to switch to students computer and see what students are doing.
3	only_outside	1	1	3	1		
4	only_outside	1	2	2	6		MORE MATERIALS FOR MATH USE
5	only_outside	1	2	4	2	LCD projectors in each classroom	not sure what is available
6	yes	1	6	3	3		
7	only_outside	1	4	3	2		
8	yes	1	6	2	1		
9	yes	1	4	3	2		lcd projectors in each room used either with a tablet or a pc
10	yes	1	2	6	2	more computers in the classroom	
11	yes	1	3	4	2	I think the tablet pcs would be excellent. The only concern I have with them is how easy the students could keyboard using them. I know they could also write and have it translated, but some of the students write so sloppy that I do not know if it would translate properly. HOWEVER, for the money and what it can do, the tablet pcs are the best option.	I think the students would benefit from content specific software that provided tutorials within the content areas. It would be nice if every student could assess these computer based tutorials to review, on a weekly basis, the material that has been previously taught.
12	only_outside	1	3	4	1	possibly laptops if less expensive	no
13	yes	1	6	4	2	NA	NA
14	yes	1	6	6	6		
15	yes	2	3	1	4		
16	yes	1	4	2	3		
17	yes	2	1	3	4		
18	only_outside	1	2	3	4		
19	only_outside	1	3	2			I use Inspirations software, and I really like its capabilities. It enhances visual learning very well.
20	yes	1	3	2	4		
21	only_outside	1	3	3	4		
22	yes	1			2		
23	only_outside	1	4	3	2		
24	only_outside	6	1	1	1	no	no
25	only_outside	2	5	2	6		
26	yes	3	2	2	2	no	i don't know
27	only_outside	1	6	2	4		
28	yes	1	3	2	2		
29	only_outside	3	3	3	3		
30	only_outside	4	2	3	1		
31	only_outside	3	1	1	2		
32	only_outside	1	2	3	4		
33	yes	1	2	3	4		
34	yes						
35	yes	1	6	2	2		
36	yes	1	3	1	2		
37	only_outside	1	3	1	1	A tablet PC would be a great addition to the classroom.	Connecting overhead projects the tablet PC for classroom presentations and demonstrations.
38	only_outside	2	5	3	3	No.	Yes PDA's.
39	yes	1	1	1	6	Good Teachers	hands on expereance
40	yes	1		2			
41	only_outside	1	4	1	4		

	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK
1	q21	q22_1-Desktop	q22_2-notebook	q22_3-PDA	q22_4Digital	q22_5DVD	q22_6-LCD	q22_7DVD-CDROM	q22_8-network	q22_9-word
2	Mobile labs, some instructors feel it is too big of hassle to use.	regular	freq	regular	like_to_learn	freq	rare			freq
3		freq	like_to_learn	rare	rare	freq	regular	freq	regular	freq
4	CHARTS/GRAPHS/	use_school	use_school	never	never	rare	use_school	rare	use_school	use_school
5	not sure	freq	rare	never	never	never	use_school	rare	use_school	use_school
6		freq	use_school							freq
7		freq	regular	rare	use_home	freq	regular	freq	freq	freq
8		use_school	use_school	never	use_home	use_home	use_school	use_school	use_school	use_school
9		freq	like_to_learn	like_to_learn	regular	like_to_learn	freq	never	freq	freq
10	laptops (time for use, space, and availability)	regular	rare	never	never	rare	never	never	regular	freq
11	A projector in each classroom would enable all teachers to take adavantage of power point presentations and internet links to teach the content. This type of interactive technology presentations would definitely enhance learning in the content areas.	use_school	use_home	rare	never	rare	regular	never	use_school	use_school
12	training teachers on technology, to better teach their students and utilize what's out there	regular	never	never	regular	never	never	never	regular	regular
13	NA	freq	use_home	regular	never	never	regular	freq	regular	freq
14		freq	never	never	never	rare	never	never	never	use_home
15		freq	rare	freq	never	use_home	regular	rare	regular	freq
16		freq	freq	freq			rare		freq	freq
17		freq	rare	like_to_learn	never	like_to_learn	rare	like_to_learn	regular	freq
18		freq	rare	freq	rare	never	never	rare	freq	freq
19	Inspirations	regular	like_to_learn	freq	regular	like_to_learn	use_school	use_home	freq	freq
20		freq	rare	freq	never	never	freq	rare	freq	freq
21		regular	use_home	never	never	never	never	never	regular	rare
22		regular	regular							regular
23	computer lab	freq	rare	use_home	use_home	rare	use_school	use_school	use_school	use_school
24		freq	freq	never	rare	freq	never	freq	freq	freq
25		use_school	use_school	rare	rare	never	rare	regular	use_school	use_school
26	I don't know	use_school	rare	like_to_learn	like_to_learn	use_home	never	use_home	use_school	use_school
27		use_school	use_school	rare	never	use_home	use_school	use_home	use_school	use_home
28		freq	rare	like_to_learn	never	like_to_learn	like_to_learn	like_to_learn	regular	freq
29	We have 2 1/2 Computer Labs available to use at school, and we have a cart of wireless tablets.	freq	use_school	rare	use_home	use_home	rare	use_home	use_home	freq
30		rare	rare		never			use_home	rare	use_home
31		freq	rare	never	never	never	rare	never	rare	freq
32		use_home	use_home	like_to_learn	rare		like_to_learn	like_to_learn	rare	use_home
33		freq	never	never	never	never	rare	regular	rare	freq
34										
35		regular	freq	rare	never	never	freq	never	regular	regular
36										
37	Training on need tools like Office.	freq	freq	rare	freq	regular	freq	freq	freq	freq
38	PDA's	freq	freq	rare	freq	rare	rare	freq	freq	freq
39	Teaching Methods	freq	freq	never	never	regular	freq	never	regular	regular
40		freq	rare	freq	never	never	never	rare	freq	freq
41		regular	regular	like_to_learn	like_to_learn	like_to_learn	like_to_learn	rare	regular	freq

	BL	BM	BN	BO	BP	BQ	BR
1	q22_10spreadsheet	q22_11-database	q22_12=powerpoin	q22_13ct	q22_14-games	q22_15im	q22_16studentmgt
2	freq	regular	regular	regular	rare	freq	regular
3	freq	never	freq	regular	regular	rare	freq
4	use_home	use_school	rare	rare	rare	rare	use_school
5	use_school	never	use_school	use_school	never	use_home	use_school
6							
7	regular	rare	freq	regular	never	regular	never
8	use_home	use_home	use_home	like_to_learn	use_school	use_home	use_school
9	freq	freq	freq	like_to_learn	rare	never	freq
10	rare	never	rare	rare	rare	never	use_school
11	use_school	like_to_learn	use_school	like_to_learn	rare	never	use_school
12	regular	rare	rare	rare	never	rare	never
13	use_home	never	use_home	never	never	use_home	use_home
14	use_home	never	never	never	never	never	never
15	freq	rare	regular	rare	never	never	regular
16	regular	rare	regular	rare	never	never	freq
17	regular	never	rare	rare	regular	never	freq
18	rare	rare	rare	rare	rare	never	rare
19	regular	like_to_learn	freq	rare	rare	use_home	freq
20	freq	rare	freq	rare	never	regular	regular
21	rare	rare	never	never	never	never	never
22	rare	rare	freq	regular	never	regular	regular
23	use_school	use_home	use_school	use_school	use_school	rare	use_school
24	freq	freq	rare	rare	freq	freq	freq
25	regular	rare	rare	rare	rare	rare	rare
26	use_school	like_to_learn	rare	like_to_learn	never	use_home	rare
27	use_home	never	use_school	never	use_school	rare	use_school
28	regular	regular	rare	regular	never	like_to_learn	freq
29	use_home	rare	use_school	use_school	rare	freq	freq
30	regular	regular		never	never	never	never
31	never	regular	rare	freq	regular	never	freq
32	like_to_learn	like_to_learn	like_to_learn	never	never	use_home	never
33	freq	regular	rare	never	never	never	never
34							
35	regular	regular	regular	rare	rare	regular	regular
36							
37	freq	freq	freq	regular	rare	freq	never
38	rare	rare	regular	rare	freq	freq	regular
39	regular	never	never	never	never	regular	never
40	freq	never	never	rare	rare	never	freq
41	rare	rare	like_to_learn	rare	like_to_learn	regular	regular