District 225 Technology Access Study

Executive Summary

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Rationale

As District 225 continues to pursue the engagement of all students in learning that is independent of time, space, and place, there is an increasing need for ubiquitous technology access for Glenbrook students. There is anecdotal evidence that while technology availability and access exists for many students, a gap is present among segments of the Glenbrook population that magnifies inequities and inhibits learning.

Objectives

During the 2010-2011 school year, District 225 established the goal of analyzing access to educational technology for current students by:

1. Gathering accurate data regarding current levels of student technology access across District 225.
2. Identifying computer, Internet and software access problems that may exist across District 225.
3. Developing effective and affordable strategies to ensure necessary technology access levels for all District 225 students.

Process

A district level committee was established to identify information needed to create a questionnaire and process for gathering data regarding current levels of access to technology across District 225.

A questionnaire was developed and refined through several revisions after input from the committee, the GBN and GBS leadership teams and ATM. Nate Untermann, a science teacher at GBN, has had extensive training in the construction of surveys and assessments. His expertise was utilized to provide focused input on the layout and design of the questionnaire. He also helped set up GradeMaster to scan in the data.

In keeping with standards that are common to internal review boards at universities, three District 225 parents reviewed the questionnaire to answer whether the survey posed any risk that would negatively impact students. No risks were identified and the surveys were given over a two-week period at GBN, GBS, GBE and Off-Campus.

Brian Wegley analyzed and summarized the results, Cameron Muir plotted computer and Internet access utilizing *BatchGeo.com* and results were shared with the leadership teams across the district.

General Findings

Access

- Access levels to computers and the Internet were generally high across the district. However, there are students in our schools with lower levels of access. Roughly 45% of economically disadvantaged, African American and Hispanic students across the district reported either not having access or sharing a computer with more than one other person. Glenbrook Evening School, before moving into their current facility, consistently reported limited access to technology – computers, Internet and software. *(Q1, 2, 3, 4, 5, 7, 8, 15, 22, 25)*

- Although Internet access was generally reported as high across the district, wireless access was reported as slightly lower levels across the district. *(Q1, 5)*

- 1 out of every 4 students across the district reported that they do not have regular access to computers at school for school purposes. For some of our disaggregated student groups, their perception of regular access drops to 1 out of every 2. *(Q7)*

- Several disaggregated groups of students identified "regularly" (3 to 4 days per week) or "daily" inability to complete homework due to the lack of access to the Internet or a computer. *(Q10, 11, 15)*

- Areas of limited access to computers and the Internet are generally focused in Glenview. *(Graphic summary of access levels)*

Use

- Students shared substantial use of computers and the Internet for assignments and homework. District wide, roughly 4 out of 5 students reported regularly needing Internet and computer access to complete assignments and homework, and students indicated interest in attaining greater access. *(Q9, 10)*

- Students across the district indicated that laptops would be of "some benefit" or a "great benefit" to their learning (1 out of every 2 shared that it would be a "great benefit"), and selected it as the device that would be the "best portable device" for their learning. In fact, currently 70% of district students indicated having access to one at this point in time. *(Q8, 15, 22, 25)*

- 1 out of 4 students district wide reported that they would use computer labs before and after school if transportation was available. In a majority of our disaggregate groups, that interest increased to roughly 1 out of every 2. *(Q12, 13)*

Support

- 4 out of 5 students district wide shared that home computer problems could be resolved within a few days. However, the ability to resolve problems within a few days dropped as low as 1 out of 2 for select disaggregated groups of students across the district. *(Q6)*

- 1 out of every 4 students across the district perceived that their parents had the ability to assist them with the computer programs they use. *(Q26)*

Immediate Solutions & Cost Estimates

Identified Gap	Potential Solution	Estimated Cost
Populations across D225 need word processing, spreadsheet and presentation software applications at home.	Students with computers will be educated about and offered Open Office and Google Apps.	$100 for CDs
Several students identified having Internet access, but not having wireless capability.	Educate parents on the low cost of upgrading to wireless.	$0
An appreciable portion of parents are perceived by students to not have the ability to support their computer use.	Development and implementation of a parent program at GBN and GBS.	$0

Long-Term Solutions

Develop effective and affordable strategies to ensure necessary technology access levels for all District 225 students.

Appendix A - Summary of Data

Computer Access:

- High levels of computer access were reported by students. *(Q1)*
    - GBN: 97.9%
    - GBS: 96.7%

  Lower computer access was reported by the following disaggregated groups:
    - GBS Economically disadvantaged students: 89.8%
    - GBS African American students: 84.6%
    - GBS Hispanic students: 78.2%
    - GBE students: 72.4%
- Many students reported having their own computer or sharing a computer with one other person. *(Q4)*
    - GBN: 85.9%
    - GBS: 79.4%

  Substantially lower computer access (individual or shared with one other) was reported by the following disaggregated groups:
    - GBN Economically disadvantaged students: 65.7%
    - GBS Economically disadvantaged students: 66.2%
    - GBN African American students: 57.1%
    - GBS African American students: 68.0%
    - GBN Hispanic students: 67.5%
    - GBS Hispanic students: 63.7%
    - GBE students: 60.0%
- Appreciable numbers of students reported not having computer access at school "regularly" (computers available several days per week) or "always" (every day). *(Q7)*
    - GBN: 32.4%
    - GBS: 30.0%

  Higher levels of difficulty were reported by the following disaggregated groups:
    - GBS African American students: 51.9%
    - GBS Hispanic students: 47.8%
    - GBE students: 43.3%
- Interest in overnight use of Netbooks and laptops was expressed by students. *(Q8)*
    - GBN: 33.9%
    - GBS: 37%

  Higher interest was reported by the following disaggregated groups:
    - GBN Economically disadvantaged students: 56.0%
    - GBS Economically disadvantaged students: 55.7%
    - GBN African American students: 100%
    - GBS African American students: 61.5%
    - GBS Hispanic students: 53.8%
    - GBE students: 58.6%

- High and relatively consistent levels of students identified having a laptop as being "some benefit" or "great benefit" to their learning. *(Q15)*
    - GBN: 84.2%
    - GBS: 83.2%
- Substantial levels of access to laptops were reported by students. *(Q22)*
    - GBN: 71.8%
    - GBS: 69.3%

  Lower levels of access to laptops were reported by the following disaggregated groups:
    - GBN Economically disadvantaged students: 57.0%
    - GBS Economically disadvantaged students: 54.7%
    - GBN African American students: 40.0%
    - GBS African American students: 57.7%
    - GBN Hispanic students: 53.7%
    - GBS Hispanic students: 41.7%
    - GBE students: 37.9%
- Substantial and relatively consistent levels of students identified laptops as the "best portable or mobile device" for their learning. *(Q25)*
    - GBN: 60.7%
    - GBS: 59.8%

Internet Access:

- High levels of Internet access were reported by students. *(Q1)*
    - GBN: 97.1%
    - GBS: 95.7%

  Lower Internet access was reported by the following disaggregated groups:
    - GBN Economically disadvantaged Students: 93.9%
    - GBS Economically disadvantaged Students: 85.6%
    - GBS African American students: 84.6%
    - GBS Hispanic students: 73.7%
    - GBE students: 69.0%
- High levels of students reported having wireless Internet access. *(Q5)*
    - GBN: 89.0%
    - GBS: 82.8%

  Lower levels of wireless Internet access were reported by the following disaggregated groups:
    - GBN Economically disadvantaged students: 74.7%
    - GBS Economically disadvantaged students: 61.4%
    - GBS African American students: 40.7%
    - GBN Hispanic students: 70.7%
    - GBS Hispanic students: 55.7%
    - GBE students: 58.6%

Software Access:

- High levels of word processing software access were reported by students. *(Q2)*
    - GBN: 97.6%
    - GBS: 94.0%

  Lower Internet access was reported by the following disaggregated groups:
    - GBN Economically disadvantaged Students: 89.9%
    - GBS Economically disadvantaged Students: 81.0%
    - GBS African American students: 80.8%
    - GBN Hispanic students: 90.0%
    - GBS Hispanic students: 65.6%
    - GBE students: 60.0%
- High levels of students reported access to word processing, spreadsheet and presentation software applications at home. *(Q2)*
    - GBN: 85.7%
    - GBS: 80.7%

  Lower access was reported by the following disaggregated groups:
    - GBN Economically disadvantaged students: 67.7%
    - GBS Economically disadvantaged students: 55.5%
    - GBN African American students: 50.0%
    - GBS African American students: 61.5%
    - GBS Hispanic students: 40.1%
    - GBE students: 43.3%

Computer Use At Home:

- High levels of computer use at home were reported "regularly" (3 to 4 days per week) to "daily" by students. *(Q3)*
    - GBN: 79.9%
    - GBS: 74.2%

  Lower Internet access was reported by the following disaggregated groups:
    - GBN Economically disadvantaged Students: 68.0%
    - GBS Economically disadvantaged Students: 55.4%
    - GBN African American students: 57.1%
    - GBS African American students: 50.0%
    - GBN Hispanic students: 67.5%
    - GBS Hispanic students: 33.3%
    - GBE students: 29.0%
- Substantial levels of students reported "regularly" (several days per week) or "daily" use of a computer at home for school purposes. *(Q9)*
    - GBN: 78.6%
    - GBS: 68.5%

Internet Use At Home:

- Substantial levels of students reported "regularly" (several days per week) or "daily" need of the Internet at home for school purposes. *(Q10)*
    - GBN: 80.6%
    - GBS: 81.9%

Obstacles to Students

- Appreciable levels of students reported "regularly" (3 to 4 days per week) to "daily" inability to complete homework due to the lack of access to the Internet or a computer. *(Q11)*
    - GBN: 12.0%
    - GBS: 12.7%

  Higher levels of inability were reported by the following disaggregated groups:
    - GBN Economically disadvantaged Students: 19.8%
    - GBS Economically disadvantaged Students: 24.3%
    - GBN African American students: 28.6%
    - GBS African American students: 24.0%
    - GBN Hispanic students: 19.5%
    - GBS Hispanic students: 31.0%
    - GBE students: 20.0%
- Discernable levels of students reported that they would use school computer labs in the evening "occasionally" (1 day per week) to "daily" if transportation were available. *(Q12)*
    - GBN: 21.2%
    - GBS: 29.1%

  Higher levels of interest were reported by the following disaggregated groups:
    - GBN Economically disadvantaged students: 34.7%
    - GBS Economically disadvantaged students: 47.9%
    - GBN African American students: 66.7%
    - GBS African American students: 48.1%
    - GBS Hispanic students: 50.3%
    - GBE students: 45.2%
- Appreciable levels of students reported that they would use school computer labs in the morning "occasionally" (1 day per week) to "daily" if transportation were available. *(Q13)*
    - GBN: 21.9%
    - GBS: 28.3%

  Higher levels of interest were reported by the following disaggregated groups:
    - GBN Economically disadvantaged Students: 34.0%
    - GBS Economically disadvantaged Students: 41.0%
    - GBN African American students: 42.9%
    - GBS African American students: 50.0%
    - GBS Hispanic students: 35.2%

- High levels of students reported the ability to fix their home computer within a few days. *(Q6)*
    - GBN: 83.1%
    - GBS: 79.1%

  Lower reported abilities to fix home computers were identified by the following disaggregated groups:
    - GBN Economically disadvantaged students: 66.3%
    - GBS Economically disadvantaged students: 64.4%
    - GBS African American students: 50.5%
    - GBN Hispanic students: 76.9%
    - GBS Hispanic students: 59.1%
    - GBE students: 60.7%
- Students shared limited perception that adults provide assistance with most or all questions they have on computer programs they use. *(Q26)*
    - GBN: 26.4%
    - GBS: 27.3%

Cell Phone Access

- Substantial levels of cell phone access were reported by students. *(Q22)*
    - GBN: 94.4%
    - GBS: 90.3%

  Lower levels of access to cell phones were reported by the following disaggregated groups:
    - GBN Economically disadvantaged students: 57.0%
    - GBS Economically disadvantaged students: 85.9%
    - GBS African American students: 84.6%
    - GBN Hispanic students: 82.9%
    - GBS Hispanic students: 82.1%
    - GBE students: 86.2%