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ABSTRACT

This paper argues that the rapid increase in the use of technology in education has changed nearly every facet of the teaching and learning experience for both faculty and students. Meredith College in Raleigh, North Carolina, launched a technology initiative in 1999 that was designed to expand the use of technology as a communication and research tool for curricular, co-curricular, and community activities. At the same time, funds were set aside to support faculty enhancement. Fifty-one incoming freshmen, who were chosen to participate in a 2-year pilot program beginning in the fall of 2000, were given laptop computers and software applications. During the students' second year, they worked on various technology projects with professors from different disciplines. The authors of this study include the following assessment activities/instruments in their paper: (1) minute paper; (2) pre- and post-Student Computer Usage Survey; (3) focus group study; (4) faculty feedback; (5) Faculty Computer Usage Survey; (6) qualitative responses on technology projects; and (7) IT Survey. Findings included: (1) more than two-thirds of the faculty respondents said they sometimes or often used computers in teaching; and (2) laptop students indicated that they increased their computer skills and worked more closely with teachers. Recommendations are included. Four of the research instruments are appended. (NB)

Assessing a technology initiative: Lessons learned while integrating technology into teaching and learning

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Introduction

Every single corner of a campus is touched by technology. The rapid increase in the use of technology in education has changed nearly every facet of the teaching and learning experience for both faculty and students (Zemsky, 2000; Gilbert 1997; Green 1997). Technology not only impacts how students acquire their knowledge and skills, but it can also drastically affect how faculty teach. The Teaching, Learning, and Technology Group (2000), an affiliate of the AAHE, states that "higher education has begun an irreversible transformation -- with information technology as the catalyst." Pioneer schools such as Seton Hall, Wake Forest University, Drexel University, and the University of North Carolina have spent tremendous resources into informational technology. Monsignore Sheeran, President of Seton Hall University, observed that although the financial commitment to infuse technology into the educational process is considerable, the investment in people's time, talent, and energy is even more significant (Sheeran, 2001). As more and more higher education institutions invest heavily in technology, it is crucial that institutions conduct ongoing assessment to determine the return on their investments – effectiveness in teaching and an increase in student learning.

In 1999, Meredith College launched a technology initiative to expand the use of technology as a communication and research tool for curricular, co-curricular and community activities. At the same time when the College was planning for the pilot, funds were set aside to support faculty in course enhancement. In fall 2000, 51 incoming freshmen were chosen to participate in a two-year pilot project designed to enhance their college experience through technology. Each participate was provided with a laptop computer and Meredith-owned software applications. During the students' second year, they worked on various technology projects with professors of different disciplines.

Since the beginning of the laptop pilot, a variety of assessment methods including focus group studies and surveys have been conducted to gather information on the impact of technology on the teaching and learning process. The findings informed the campus community regarding (1) the students' experience with technology inside and outside the classroom, (2) the faculty's experience with integrating technology into the teaching and learning process, (3) what the students as well as the faculty considered the most important things the College could do to improve their computer literacy skills, and (4) the growth in the students' learning in the areas of technology.

Methodology

A variety of assessment activities were conducted since fall 2000. The assessment activities/instruments include the following:

Minute Paper. (Appendix A) In fall 2000, the 51 pilot students received their laptops and attended a hands-on introductory session during orientation. At the conclusion of the two-hour session, the students were asked to respond to questions such as "What is the most useful or meaningful thing you learned during the session? and "What question(s) remain upper-most in your mind as we end these sessions?"

Pre- and Post- Student Computer Usage Survey. (Appendix B) The computer usage survey was developed to gather responses from both incoming freshmen and upper-class students on how they rate (1) their skills and comfort levels in using computers, (2) the helpfulness of different methods of acquiring computer skills, (3) their competency in using various applications, and (4) their perception on the effectiveness of computers in enhancing learning both inside and outside the classroom. Towards the end of spring 2001, a follow-up student computer survey was administered to all pilot

students regarding their perceived skill level of using various software applications, how technology can enhance learning, and different ways of using the computer.

Focus Group Study. Towards the end of fall 2000, eight pilot students and eight non-pilot freshmen were selected to participate in a focus group study. The purpose of the study was to learn about the needs and learning experiences of students who were in the pilot program as well as those who were not.

Faculty Feedback via E-mail. Towards the end of fall 2000, all faculty were asked to respond via e-mail to the question, "What are the three most important things that Meredith College could do to improve the computer literacy skills of faculty?"

Faculty Computer Usage Survey. (Appendix C) In spring 2001, an on-line survey was administered to all faculty. The survey gathered responses from faculty regarding their perceived skill level of using various software applications, how technology can enhance learning, and different ways of using computer in teaching.

Qualitative Responses on Technology Projects. In spring 2001, laptop students were asked to respond to questions about their learning experience with regard to the technology projects during the second year of the pilot. Some of the questions asked include:

(1) What is the most meaningful thing you have learned through this process?

(2) Do you think other students will benefit from a similar experience like yours? Explain.

(3) What could the College have done to have made the laptop project a more successful experience for you?

IT Survey. (Appendix D) During orientation of fall 2001, an IT survey was administered to fall 2001 incoming freshmen. The purpose of the IT Survey was to assess

students' perceived levels of competency in various computer functions of different software applications. The same IT Survey was administered to upper-class students for comparison purposes in spring 2002. The survey asked the students to indicate their comfort level in six areas: (1) File Management, (2) Word Processing, (3) Spreadsheet, (4) Presentation Graphics, (5) Database, and (6) Web Use.

Research Findings

The College learned a great deal from the assessment activities conducted. The following research findings center around the four topics: (1) the students' experience with technology inside and outside the classroom, (2) the faculty's experience with integrating technology into the teaching and learning process, (3) what the students and the faculty considered the most important things the College could do to improve their computer literacy skills, and (4) the students' growth in the areas of technology.

Students' experience with technology inside and outside the classroom

Findings from the *Minute Paper, Computer Usage Survey, and Focus Group Study* indicated the following:

1. Responses to the *Minute Paper* questions indicated that the level of computer literacy among the students varied greatly. Two of the mostly frequently asked questions included how to use Blackboard and software such as PowerPoint and Excel to complete assignments. Students also had questions about how the laptop would be used in the classroom and downloading policy on non-Meredith software.
2. Over sixty percent of all incoming freshmen considered themselves intermediate in computer literacy. Freshmen also reported that the top three methods of learning computer literacy skills are *Teachers (3.10), Friends (3.05), and Computer Support*

Staff (2.91). The following table showed the students' ratings of various methods of learning computer literacy skills.

Table 1. The effectiveness of various methods for learning computer literacy skills. (1=not effective; 2=somewhat effective; 3=effective; 4=very effective)

	IF[1]	NP[2]	P[3]	HSTF[4]
Teachers	3.10	3.09	3.13	3.08
Friends	3.05	3.03	3.19	3.27
Computer Support Staff	2.91	2.87	3.16	2.97
Trial and error	2.80	2.76	2.89	3.25
On-campus computer lab	2.64	2.66	2.49	2.67
Printed manual that comes with a program	2.61	2.59	2.69	2.60
Siblings	2.60	2.60	2.56	2.58
Parents	2.53	2.54	2.43	2.32
Electronic on-line help	2.49	2.50	2.44	2.67
Non-credit workshops	2.29	2.27	2.43	2.60
Printed popular books about computers	2.24	2.24	2.30	2.38
Credit Classes	N/A	N/A	N/A	3.13

[1] IF = Incoming freshmen;
[2] NP = Incoming freshmen who are non-participants of laptop pilot;
[3] P = Incoming freshmen who are participants of laptop pilot (all are Honor students and/or Teaching Fellows);
[4] HSTF = sophomore, junior, and senior Honors and Teaching Fellows

Upper-class students considered *Friends (3.27)* and *Trial and Error (3.25)* the most effective in acquiring computer skills.

3. Upper-class students gave appreciably higher ratings in their skills to use e-mail, world wide web, and word processing. However, in the area of spreadsheets, database, and web page development, the ratings among freshmen and upper-class students were similar. The following table showed students' ratings of their skills levels in using various computer applications:

Table 2. Rating of skill levels in using the following (1=no skill; 2=beginner; 3=intermediate; 4=proficient; 5=expert: you know this area well enough to teach someone else how to use it):

	IF*	NP*	P*	HSTF*
E-mail	3.78	3.80	3.70	4.30
World wide web	3.46	3.47	3.43	4.03
Word processing	3.72	3.70	3.87	4.34
Presentation graphics	2.50	2.48	2.64	2.68
Spreadsheets	2.53	2.51	2.68	2.70
Databases	2.30	2.27	2.47	2.41
Web page development software	1.57	1.56	1.62	1.50

*IF = Incoming freshmen;
P = Incoming freshmen who are participants of laptop pilot (all are Honor students and/or Teaching Fellows);
HSTF = sophomore, junior, and senior Honors and Teaching Fellows
NP = Incoming freshmen who are non-participant of laptop pilot;

4. The laptop students in the focus group felt that there was only a limited use of the laptops in the classroom. There seemed to be a gap between what the students expected and what they actually experienced.

5. Students expected that the teachers to be proficient in computer use and able to do whatever they expected students to do in terms of computer-related tasks.

6. Both laptop and non-laptop participants used the computer primarily for e-mail, internet research, homework, word processing, and Blackboard.

Faculty's experience with integrating technology into the classroom

Findings from the *Faculty Computer Usage Survey* and other qualitative responses include the following:

1. The computers were primarily used for information gathering, communication with students, writing assignments, and presentations. There was limited use of the computer for statistical analysis, modeling and simulation, and individualized instruction. The following table showed faculty's ratings of computer use.

Table 3. Faculty rating of computer use (1=never; 2=rarely; 3=sometimes; 4=often; 5=always)

Computer Use:	Ratings:
As a means of information gathering	3.60
As a means of communication with you and other students in your class	3.58
For writing assignments	3.53
For presentations	3.15
For individualized instruction, e.g., tutorial and review materials	2.38
For statistical analysis	1.92
For modeling and simulation	1.78

2. Over two-thirds (67.9%) of the faculty responded rated their computer literacy at the intermediate level.
3. Over two-thirds (68.0%) of the faculty responded said that they *sometimes* (34.0%) or *often* (34.0%) used computers in teaching their classes. About a fifth (20.7%) said they *rarely* used the computers in teaching any aspect of their classes.
4. The top two responses to the question, "What are some things you plan to do to enhance your own computer literacy skills," included (1) attend more workshops and (2) learn to use Blackboard and other software applications. In addition, the faculty also related the greatest challenge in acquiring and implementing computer skills was time due to the heavy workload.

What the students as well as the faculty considered the most important things the College could do to improve their computer literacy skills

Findings from the *Computer Usage Survey, Focus Group Study, Faculty Feedback, and Qualitative Responses on Technology Projects* indicated the following regarding the most important things that the College can do to improve computer literacy skills among faculty and students:

1. Upper-class Honors and Teaching Fellows said that *Classes and Workshops, Technical Support, and Up-to-date Technology* were the most important things. However, very few students attended the workshops that were offered.
2. Students in focus groups indicated that requiring a technology component in the classes would be an effective way for them to learn computer skills.
3. Computer support staff, workshops, and colleagues were the top three methods that faculty considered most effective for learning computer literacy skills. The following table showed the faculty ratings of various methods of learning computer skills.

Table 4. The effectiveness of various methods for learning computer literacy skills. (1=not effective; 2=somewhat effective; 3=effective; 4=very effective)

Methods of Learning:	Rating:
Computer support staff	3.31
Workshops	3.10
Colleagues	2.57
Trial and error	2.52
Printed manual that comes with a program	2.40
On-campus computer lab	2.36
Printed popular books about computers	2.28
Students	2.24
Electronic on-line help	2.20

4. Faculty suggested organizing training opportunities to share ideas on how technology is used in teaching and learning.
5. Faculty expressed the need for the College to allow them the time to attend workshops, learn, and implement new technology into their teaching. Other comments include providing stipends for attending workshops.

The growth in the students' learning in the areas of technology: Baseline Information

Presently, there is no computer competency test to quantitatively measure student performance in computer skills. A computer competency test will be part of the general

education reform still in progress. From the responses of the laptop students in the technology projects, several interesting findings emerged:

1. Regarding laptop students' responses to the technology projects, almost all of the respondents (14 out of 17) indicated that the most meaningful thing they had learned through this process were the opportunity to acquire new computer skills or polish previously learned computer skills, and the second most meaningful thing was the opportunity to work closely with their professors (6 out of 17).
2. The responses to the question, "Do you think other students will benefit from a similar experience like yours?" were mixed. Respondents who indicated that other students would benefit from a similar experience reported that a close working relationship with the professor and the opportunity to learn new computer skills were valuable. Respondents who did not think other students would benefit from a similar experience said that the technology projects needed to be intellectually challenging and that the professor's commitment and knowledge were essential to a positive experience.
3. In response to the question of what the College could have done to make the laptop project more successful, students suggested the following:

    a. Clear objectives and guidelines for the technology projects
    b. Professors need to be knowledgeable about computers
    c. Encourage the use of laptops in the classroom
    d. Require a technology component within courses

4. The IT Survey administered to fall 2001 freshmen during orientation and to juniors and seniors displayed an appreciable increase in comfort with using various functions of computer applications. However, there was still a large percent and in some cases significant number of students who did not have experience in many functions of spreadsheet, database, and web use.

Discussion

Assessment findings informed the College community about what we need to do to effectively integrate technology into teaching and learning. The following are the recommendations:

Integrate a computer technology component into curriculum. The most effective way to teach computer skills is to integrate the use of computer technology in courses and to require students to use applications in course assignments. Examples of integrating a computer technology component in courses are using a database to keep track of research data/information, developing web pages to publish student work, and using presentation graphics for oral presentations.

Articulate explicitly the computer competency expected of all students. The College needs to articulate explicitly what the students are expected to know in terms of computer literacy skills. The IT Survey only provides information on what the students perceive and does not offer concrete evidence as to what the students can do. A computer competency requirement with explicit learning outcomes will be an important assessment activity that can effectively inform the College of the computer literacy of our students.

Increase faculty involvement and their computer knowledge. Understanding the challenges that faculty face is an important step to encouraging faculty participation in using technology in teaching. Some of the bigger issues include time to learn and implement technology into teaching and faculty's varying computer expertise. However, faculty also need to be aware that students expect them to be proficient and able to do whatever students were required to do in terms of computer-related tasks.

A variety of support strategies are essential to faculty development. They include workshops, student technical assistants, colleagues, and technical support. Although the faculty indicated that workshops were one of the most helpful things the College could do to improve faculty computer literacy skills, the attendance of workshops in the past year was low. Suggestions for more effective workshop offerings and other strategies to encourage faculty involvement include:

a. Be explicit in the learning objectives of workshops. Literature on adult learning theories concluded that adult learners acquire knowledge and skills that they perceive as relevant and meaningful to their own experiences. Therefore, instead of offering workshops such as Word Level I, II, and III, offer classes on how to accomplish specific tasks as they relate to teaching. Examples are as follows:

   i. Editing students' papers electronically in Word *(using track changes in Word)*
   ii. Using Excel as a grade book
   iii. Printing address labels using Access *(mostly for staff)*
   iv. Using Access to keep an inventory of books in your office/lab

   The level of workshop participants' computer skills varies greatly. Having explicit learning outcomes will alleviate the problem of disparity in computer skills since specific course objectives will apply to participants with a common goal in mind.

b. Gather information on how Meredith faculty, as well as faculty from other institutions, use technology in their courses and share them with the campus community on a regular basis. Assessment findings indicated that there is a gap between what the student expected and what they actually experienced in the use of the laptop both inside and outside the classroom. It is important that faculty continue to explore ideas and ways to incorporate the use of computer technology into teaching and learning. The Mathematics department, for instance, expects to greatly increase

its classroom use of laptops when interactive software such as Maple becomes part of the common load on all laptops.

Manage students' expectations in the use of laptops inside the classroom. There is a gap between what the students expected and what they actually experienced inside the classroom. Students reported that the use of laptops was minimal. The College needs to communicate to students that technology use is broader than laptop use inside the classroom setting. Having a laptop enhances the social aspect of college life. Students indicated that they enjoyed the opportunity to socialize with their friends within a wireless environment and that they could work outside the dorms where they could see others passing by and if they were online and noticed something they wanted to share, they could pick up their laptops and walk into a friend's room without losing the connection.

Require all students to have a Meredith e-mail account. The logistics of administering the IT survey to juniors and seniors would have been much simpler if the College had students' e-mail addresses. In order to inform the students about the survey, staff had to deliver flyers to campus mail boxes, dorms, and bulletin boards. The lack of uniform e-mail addresses resulted in limitation of communication between the College and students. It is recommended that all students/faculty (incl part-time) have a Meredith e-mail account and that students/faculty be told that communication between the College and them will be via Meredith e-mail accounts.

Future Assessment Activities

On-going assessment is an important part of the technology initiative. Upcoming assessment will include conducting the IT survey (Appendix D) for faculty and staff to gather information on their comfort level of using various applications. A computer

competency test will also be part of the reformed general education curriculum. Students' as well as faculty's experience with technology in the learning and teaching process will be assessed for continuous improvement.

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Appendixes

Appendix A

Note: The minute paper technique is adopted from Tom Angelo's presentation on classroom technique during the AAHE Assessment Conference 2000. The two questions were e-mailed to all laptop students shortly after the orientation session.

The Minute Paper

Please answer each question in 1 or 2 sentences:

1. What was the most useful or meaningful thing you learned during this class?

_____

_____

_____

_____

_____

2. What question(s) remain upper-most in your mind as we end this class?

_____

_____

_____

_____

_____

Name: _____

E-mail: _____

Appendix B

Fall 2000 Incoming Freshmen Computer Usage Survey

Please mark your responses with a Number 2 pencil on the answer sheet. DO NOT fill out your name and ID number. Return the survey and your answer sheet to the student adviser.

1. Are you a participant in the laptop project?
   1) Yes, I am a Teaching Fellow
   2) Yes, I am an Honors Student
   3) Yes, I am both a Teaching Fellow and an Honors Student
   4) No, I am not a participant

2. If you are *not* a participant in the laptop pilot project, do you own a computer or plan to purchase a computer and use it for school assignments?
   1) Yes, I own a computer
   2) Yes, I plan to purchase a computer
   3) No, I neither own a computer nor plan to purchase one
   4) Not applicable, I am a participant

3. How many years have you been using a computer?
   1) None, never used a computer 2) Less than 2 years 3) 3-4 years 4) 5-6 years 5) more than 6 years

4. Which operating system do you use most?
   1) Windows 95/97/98/00 2) Linux 3) Macintosh 4) Other 5) Not sure

Using the following scale, please rate **your skill level for each of the following areas** (**1**-no skill; **2**-beginner; **3**-intermediate; **4**-proficient; **5**-expert: you know this area well enough to teach someone else how to use it):

		No skill	Beginner	Intermediate	Proficient	Expert
5.	E-mail	1	2	3	4	5
6.	World wide web	1	2	3	4	5
7.	Word processing	1	2	3	4	5
8.	Presentation graphics	1	2	3	4	5
9.	Spreadsheets	1	2	3	4	5
10.	Databases	1	2	3	4	5
11.	Web page development software	1	2	3	4	5

12. Have you ever done class-related research on the Internet? 1) Yes 2) No

13. http://www.meredith.edu is an example of a
    1) URL 2) web browser 3) LAN 4) news group 5) HUB

14. Have you ever installed a new program on a computer? 1) Yes 2) No

15. How do you rate your computer literacy?
    1) Beginning 2) Intermediate 3) Advanced 4) I do not consider myself computer literate

Rate the effectiveness of each method for learning computer literacy skills

		Not Effective	Somewhat Effective	Effective	Very Effective	No Knowledge
16.	Parents	1	2	3	4	5
17.	Siblings	1	2	3	4	5
18.	Friends	1	2	3	4	5
19.	Teachers	1	2	3	4	5
20.	Computer support staff	1	2	3	4	5
21.	Electronic on-line help	1	2	3	4	5
22.	Printed manual that comes with a program	1	2	3	4	5

23.	Printed popular books about computers	1	2	3	4	5
24.	Trial and error	1	2	3	4	5
25.	Non-credit workshops	1	2	3	4	5
26.	On-campus computer lab	1	2	3	4	5

Please indicate your level of agreement with the following statements:

		Strongly disagree	Disagree	No Opinion	Agree	Strongly Agree
27.	I feel comfortable using computers.	1	2	3	4	5
28.	The use of computers will help me learn more at Meredith.	1	2	3	4	5
29.	I expect that I will be required to use computers in my future job.	1	2	3	4	5
30.	Increased use of technology will make learning easier.	1	2	3	4	5
31.	Computers will be effective for communicating with other students about class-related work at Meredith.	1	2	3	4	5
32.	Computers will be effective for communicating with faculty about class-related work at Meredith.	1	2	3	4	5
33.	Computers will be effective for communicating with faculty about non-course-related topics at Meredith.	1	2	3	4	5
34.	The use of computers positively impacts my social life.	1	2	3	4	5
35.	Computers provide a non-threatening way to communicate.	1	2	3	4	5
36.	The use of computers will make the academic climate of Meredith intellectually exciting.	1	2	3	4	5
37.	When communicating using a computer, one does not need to be formal.	1	2	3	4	5
38.	Computers allow me to communicate with people with whom I would not normally be able to communicate.	1	2	3	4	5
39.	In general, I find computers empowering.	1	2	3	4	5

40. Scott, an avid baseball fan, has created his own website and published it on the Internet. In his design, he has incorporated the Atlanta Braves logo in his "Home Run Derby" section. Below the logo, Scott included the text "The Braves Logo, property of the Atlanta National League Ball Club, Inc". Which of the following is the correct answer:

    1) Scott has violated copyright laws because the Braves logo is copyrighted
    2) Scott has violated copyright laws by using the logo without permission from the Braves Owners
    3) Scott has not violated any copyright laws because the logo is a small part of the website
    4) Scott has not violated any copyright laws because the Braves logo is considered to be in the public domain

Thank you for taking the time to complete this survey. Enjoy your time at Meredith!

Appendix C

Fall 2000 Faculty Computer Usage Survey (On-Line)

There are 39 items and one open-ended question in this survey form.
It will take about 3 minutes to complete the 39 survey items.
Be assured that all of your responses will be kept confidential!

1. How do you rate your computer literacy?
   1) Beginning 2) Intermediate 3) Advanced 4) I do not consider myself computer literate 5) I do not use a computer

2. What is your faculty contract status? 1) Full-time 2) Part-time

Rate the effectiveness of each method for learning computer literacy skills:

		Not Effective	Somewhat Effective	Effective	Very Effective	No Knowledge
3.	Colleagues	1	2	3	4	5
4.	Students	1	2	3	4	5
5.	Computer support staff	1	2	3	4	5
6.	Electronic on-line help	1	2	3	4	5
7.	Printed manual that comes with a program	1	2	3	4	5
8.	Printed popular books about computers	1	2	3	4	5
9.	Trial and error	1	2	3	4	5
10.	Workshops	1	2	3	4	5
11.	On-campus computer lab	1	2	3	4	5

12.	Compared to other people in your field, how knowledgeable are you with computers?	Much less (value=1	Somewhat less 2	About the same 3	Somewhat more 4	Much more 5)
13.	How often do you use computers in teaching any aspects of your classes?	Never (value=1	Rarely 2	Sometimes 3	Often 4	Always 5)
14.	What percent of your students do you perceive to be proficient in the use of computers?	Less Than 10%	10-25%	26-50%	51-75%	More than 75%

How often do your students use computers in the following ways for your classes:

		Never	Rarely	Sometimes	Often	Always
15.	As a means of communication with you and other students in your class	1	2	3	4	5
16.	As a means of information gathering	1	2	3	4	5
17.	For writing assignments	1	2	3	4	5
18.	For statistical analysis	1	2	3	4	5
19.	For modeling and simulation	1	2	3	4	5
20.	For presentations	1	2	3	4	5
21.	For individualized instruction, e.g., tutorial and review materials	1	2	3	4	5

What are some things you plan to do to enhance your own computer literacy skills?

Indicate the ways in which the use of computers have changed your teaching:

		Not at all	Somewhat	Moderately	Significantly	Greatly
22.	Presentation in class	1	2	3	4	5
23.	Communication with students	1	2	3	4	5
24.	Communication with colleagues	1	2	3	4	5
25.	Access to resource materials	1	2	3	4	5

Indicate to what extent you agree or disagree with the following statements:

		Strongly disagree	Disagree	No Opinion	Agree	Strongly Agree
26.	Students feel comfortable using computers.	1	2	3	4	5
27.	The use of computers helps students learn more.	1	2	3	4	5
28.	I expect that students will be required to use computers in their future job.	1	2	3	4	5
29.	Increased use of technology in teaching makes learning easier.	1	2	3	4	5
30.	The use of computers makes teaching more effective.	1	2	3	4	5
31.	Computers are effective for communicating with other students about class-related work.	1	2	3	4	5
32.	Computers are effective for communicating with faculty about class-related work.	1	2	3	4	5
33.	Computers are effective for communicating with faculty about non-course-related topics.	1	2	3	4	5
34.	The use of computers positively impacts students' social life.	1	2	3	4	5
35.	Computers provide a non-threatening way to communicate.	1	2	3	4	5
36.	When communicating using a computer, one does not need to be formal.	1	2	3	4	5
37.	The use of computers makes the academic climate of Meredith intellectually exciting.	1	2	3	4	5
38.	Computers allow students to communicate with people with whom they would not normally be able to communicate.	1	2	3	4	5
39.	The use of computers increases collaborative learning at Meredith.	1	2	3	4	5

Appendix D

Fall 2001 IT Survey

Be assured that the information collected for this study will be kept absolutely confidential and no reference will be made in any oral or written report that would link you individually to the study.

Social Security Number: ___ ___ ___ - ___ ___ - ___ ___ ___ ___

Darken the ovals completely. All erasures must be complete. Please make your marks as follows:

Like this: ● Not like this: ✗ ✓ ⊘

What is your classification?

○ Freshman ○ Sophomore ○ Junior ○ Senior

What do you plan to major in? _____

Please fill in your responses to indicate your comfort level in performing the following tasks using the following scale:

Scale: ⓝe =no experience
① =not comfortable at all <---⑥ =very comfortable

File Management:							
Copy and move files to desired locations	ⓝe	①	②	③	④	⑤	⑥
Make new folders	ⓝe	①	②	③	④	⑤	⑥
Rename files	ⓝe	①	②	③	④	⑤	⑥
Find files	ⓝe	①	②	③	④	⑤	⑥
Set mouse speed	ⓝe	①	②	③	④	⑤	⑥
Create shortcuts	ⓝe	①	②	③	④	⑤	⑥
How comfortable are you learning the above functions on your own?		①	②	③	④	⑤	⑥
Word Processing:							
Change fonts and font sizes	ⓝe	①	②	③	④	⑤	⑥
Set/use tabs part of document	ⓝe	①	②	③	④	⑤	⑥
Insert and resize clip art	ⓝe	①	②	③	④	⑤	⑥
Insert chart either fixed or linked	ⓝe	①	②	③	④	⑤	⑥
Customize toolbars	ⓝe	①	②	③	④	⑤	⑥
Create footers and headers	ⓝe	①	②	③	④	⑤	⑥
Create a table	ⓝe	①	②	③	④	⑤	⑥
Merge and split cells within a table	ⓝe	①	②	③	④	⑤	⑥
Create sections	ⓝe	①	②	③	④	⑤	⑥
Create newsletter columns	ⓝe	①	②	③	④	⑤	⑥
Track changes to a document (e.g., highlight changes on screen)	ⓝe	①	②	③	④	⑤	⑥
How comfortable are you learning the above functions on your own?		①	②	③	④	⑤	⑥

(OVER)

	Scale: ⓝⓔ =no experience ① =not comfortable at all <----⑥ =very comfortable
Spreadsheet:	
Change row height	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Change formats (e.g., format numbers as currency or percentages)	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Name a range of cells	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Use functions such as SUM and AVERAGE	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create formulas that use absolute references	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create different types of charts (e.g., bar and pie charts)	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Sort data	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Freeze/Unfreeze panes	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Link cells to different worksheets	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Use formulas to create what-if scenarios	ⓝⓔ ① ② ③ ④ ⑤ ⑥
How comfortable are you learning the above functions on your own?	① ② ③ ④ ⑤ ⑥
Presentation Graphics:	
Create a title and bullet slide presentation using existing template	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create a slide in Outline View	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Apply a different design template	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Apply a custom template	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Insert a graphic logo	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Add transitions and animation to a slide show	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Save presentations for Internet viewing	ⓝⓔ ① ② ③ ④ ⑤ ⑥
How comfortable are you learning the above functions on your own?	① ② ③ ④ ⑤ ⑥
Database:	
Create a new database	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create a table	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create a report	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create a form for entering data	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create a select query to view specific fields	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create a report from a query	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Import data from a text file	ⓝⓔ ① ② ③ ④ ⑤ ⑥
How comfortable are you learning the above functions on your own?	① ② ③ ④ ⑤ ⑥
Web:	
Find people and businesses on the Internet	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Conduct a search using Boolean logic such as AND and OR	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create web pages with external links	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Use picture as hyperlinks	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Create a table	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Design a page using frames	ⓝⓔ ① ② ③ ④ ⑤ ⑥
Edit HTML	ⓝⓔ ① ② ③ ④ ⑤ ⑥
How comfortable are you learning the above functions on your own?	① ② ③ ④ ⑤ ⑥

Thank you for taking the time to complete this survey!

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