

Muskegon Community College Teaching with Technology Needs Assessment Administrative Technology Needs Assessment Highlights – Fall 2006

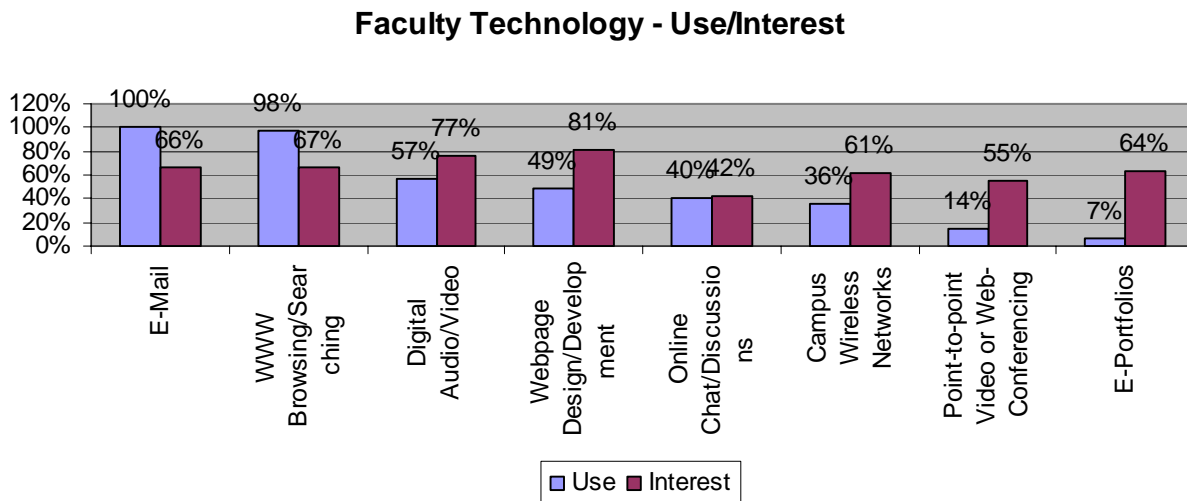
The Teaching with Technology Needs Assessment (TTNA) is designed to measure faculty use of various academic technologies, their current level of expertise with these technologies, and their interest in training. The Administrative with Technology Needs Assessment (ATNA) is designed to measure staff use of various administrative technologies, their current level of expertise with these technologies, and their interest in training. At Muskegon Community College, a TTNA and an ATNA were conducted in Fall 2006. Please see the **Complete TTNA Report** and the **Complete ATNA Report** for a presentation of the methodology and a full set of findings and data tables for each assessment. This summary provides major highlights from the 2006 findings with interpretations and recommendations.

A review of Muskegon Community College TTNA and ATNA findings suggests three areas of focus: 1) desktop technologies & software, 2) classroom technologies, and 3) online learning. The first area includes highlights from the TTNA and ATNA; whereas areas two and three focus only on faculty response on the TTNA.

1) Desktop Technologies & Software

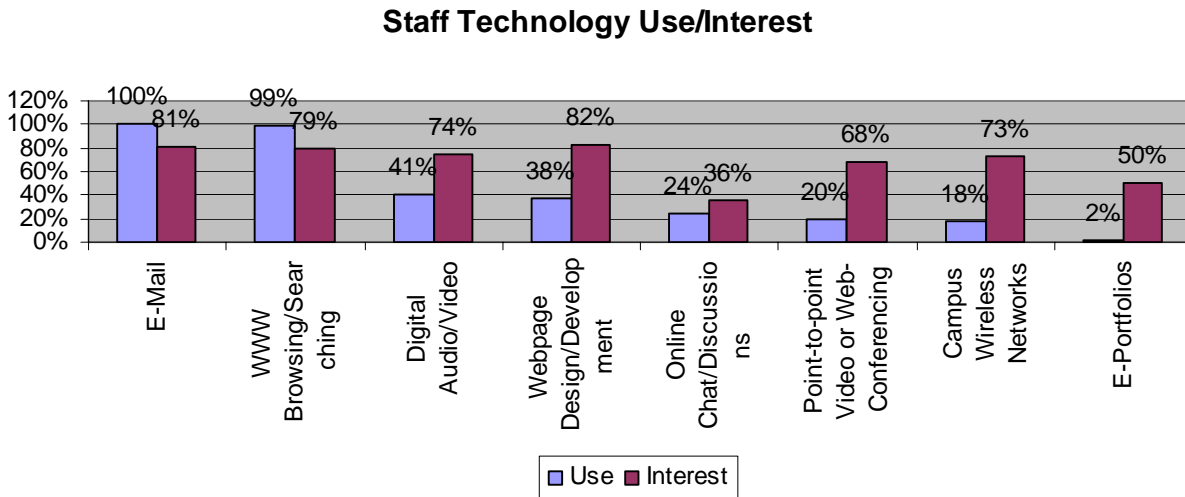
At Muskegon, faculty and staff use with technology varies. For example, most faculty and staff tend to use Email and WWW browsing/searching most frequently. Yet other technologies used by fewer faculty and staff, like Webpage design/development, online chat/discussion, digital audio/video, point-to-point video or web-conferencing, campus wireless networks, and e-portfolios. For faculty, interest in learning more about all of these technologies is relatively high with over half of all faculty responding they are at least somewhat interested in learning more (see Chart 1). The one exception is with online chat/discussions where less than half of the faculty indicate they are interested in learning more, likely because they do not see this technology as useful for their work. The two areas where the most faculty show interest in learning more is webpage design/development (81%) and digital audio/video (77%) – two technologies that many faculty do not use regularly (only 57% of faculty indicate they currently use digital audio/video and 49% indicate they do webpage design/development).

Chart 1.



Compared to faculty, fewer staff use many of the technologies (Chart 2). Yet, staff interest in learning more about all the technologies is very high, with the exception of online chat/discussions (where, like faculty, use and interest in learning more is lower). The two areas that the most staff show interest in learning more about is Webpage design/development (82%) and Email (81%).

Chart 2.

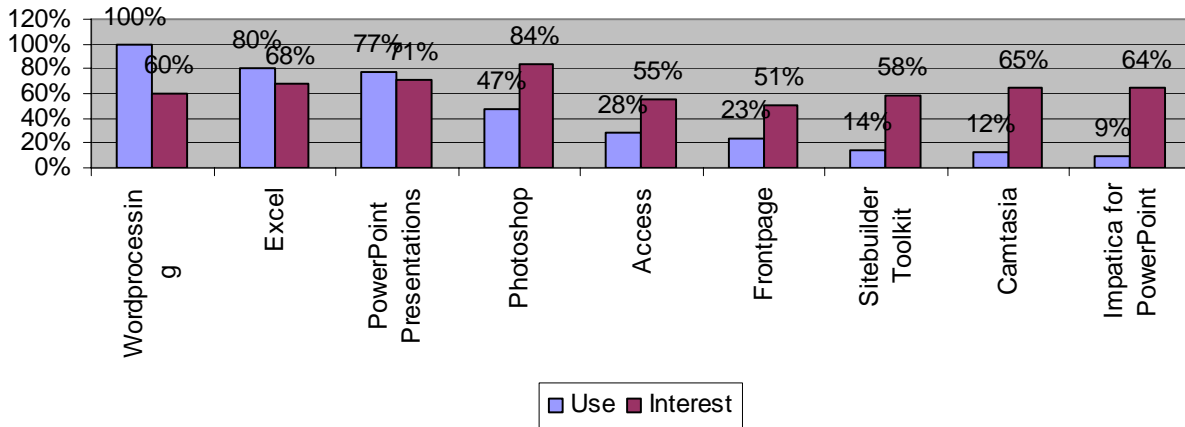


One major difference between the faculty and staff response is that most staff are interested in learning more about the technologies they use (i.e. Email and WWW browsing/searching); whereas more faculty are interested in learning more about technologies that they do not have experience with (i.e. Webpage design/development and digital audio/video).

A similar pattern can be found when we examine faculty and staff use of various software and their interest in learning more. Overall, faculty use and staff use of software varies depending on type, but their interest in learning more is relatively high across all the software packages. In particular, all faculty report using wordprocessing and most faculty use Excel (80%) and PowerPoint (77%) (Chart 3). Although many faculty indicate they are at least somewhat interested in learning more about these three software packages (60% wordprocessing, 68% excel, and 71% PowerPoint); even more faculty show interest in learning more about Photoshop (84%), which is currently only used by 47% of faculty.

Chart 3

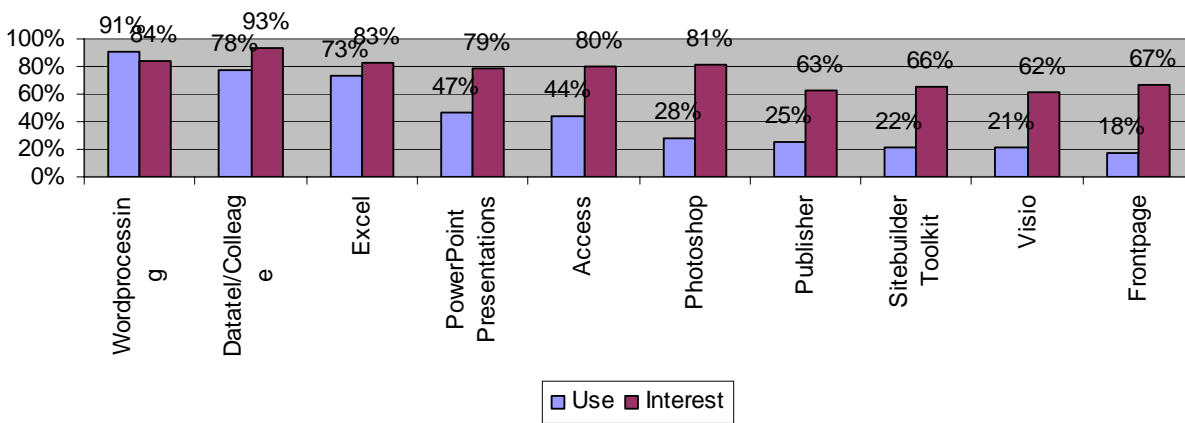
Faculty Software - Use/Interest



For staff, interest in learning more is highest for the software that the most staff use, i.e. wordprocessing (used by 91%), Datatel/colleague (used by 78%) and Excel (used by 73%) (Chart 4). However, most staff also show interest in learning more about software that they do not currently use (i.e. PowerPoint, Access, Photoshop, Publisher, Sitebuilder Toolkit, Visio, and Frontpage).

Chart 4.

Staff Software - Use/Interest



To summarize, most faculty and staff do not use many to most of the desktop technologies and software available to them at Muskegon Community College. However, most faculty and staff indicate they are at least somewhat interested in learning about all these technologies and software packages. Since faculty and staff interest is so high, training and development should be prioritized. For staff, training should center on that technology that most staff use regularly (i.e. wordprocessing, Datatel/Colleague, and Excel). For faculty, it appears that training could focus on software that facilitates webpage design/development, since this is an area that many faculty indicated they wanted to know more about.

Regarding the time technology-related training should be offered, many staff reported that Wednesday (56%) and Thursday (60%) would be their preferred days and 62% indicate that mornings, 8am-11am

would be preferred. For faculty, Tuesday (46%) and Thursday (51%) and the afternoon time of 2pm to 5pm (55%) were the most preferred days and times for training.

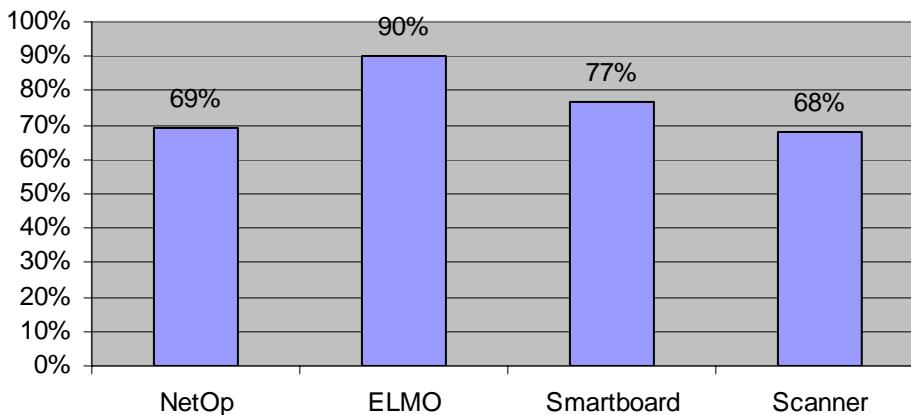
In addition, concerning professional development for faculty, one adjunct faculty reported, "I am an adjunct instructor. We are not involved in the faculty professional development...". Muskegon should consider what types of professional development opportunities around technology and instruction could be offered their adjunct faculty. At Muskegon Community College, the adjunct faculty population makes up over half of the teaching faculty in a given term (based on Fall 2006 data used for TTNA). Adjunct faculty comments suggest that some part-time faculty feel unconnected to the institution. In addition, extremely low response from adjuncts to the TTNA (16%) also suggests that as a group adjunct faculty are less invested in the institution than their full-time counterparts. With such a large proportion of adjunct faculty teaching each term (59% of the Fall 06 faculty are adjuncts), it is critical to consider the benefits of including this group in professional development opportunities involving technology and teaching.

2) Classroom Technologies

Many faculty (73%) report that they had taught in a computer-mediated or classroom with technology components. However, only a little more than half of those faculty who have taught in the computer-mediated classrooms (53%) report that they use the computer in connection with projection equipment during every class session or in more than half of the class sessions. In addition, most faculty who use the computer-mediated classrooms do not use some of the classroom technologies at all (Chart 5).

Chart 5.

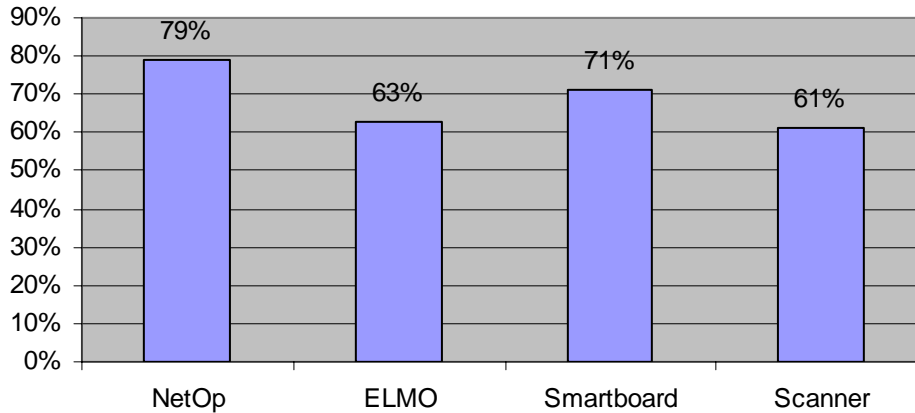
Classroom Technology - Do Not Use



Thus, much of the computer classroom technologies do not appear to be unused by faculty for teaching. Initiatives aimed at increasing the use of classroom technologies is important to show a return on these investments. Attention should be not only on those technologies that faculty are not using at all, but also on technologies that some faculty use regularly. For example, 77% of faculty report they are at least somewhat interested in learning more about how to use the computer in connection with projection equipment, which most faculty (85%) already use to some degree. In addition, many faculty also show interest in learning more about the classroom technologies they currently do not use (see Chart 6).

Chart 6.

Classroom Technology - Interest



The relatively high level of interest in learning more about these technologies could suggest that faculty are not using the technology as a result of not knowing how to use the technologies effectively. For example, one faculty said, "...virtually anything that can be done on a several thousand-dollar SmartBoard can be done with my dry erase marker" and another said "...sometimes there is pressure to use the Smartboard just because it's there, but I feel limited by its 'clunky' markers". Comments such as this indicate that faculty could benefit from training that explains how to use the technology, with an emphasis on effective pedagogy.

Another explanation for the lack of use of the classroom technologies may be that faculty perceive the classroom technology infrastructure as unreliable, unavailable or that the support is not adequate. Some faculty comments illustrate this possibility. For example, when asked what discourages faculty use of technology for instruction, some faculty responded:

- *The classroom I teach in is much too small to integrate much technology, there are only two electrical outlets in the classroom (technology needs electricity)...*
- *Outdated technology in lecture-style rooms*
- *...Sometimes the lab techs in our lab classroom are a little menacing. I know they're trying to be helpful, but sometimes it's easier to avoid technology to avoid interjections.*

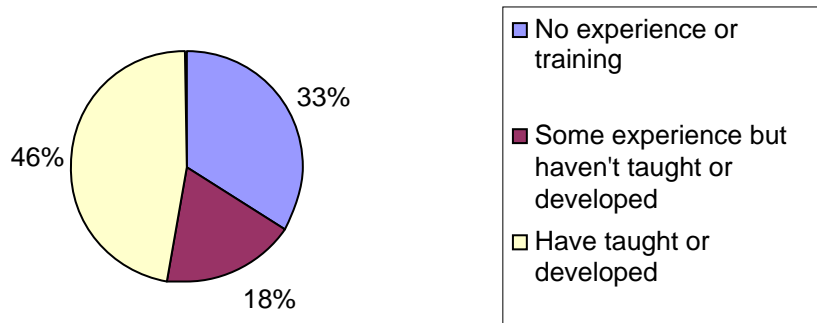
Thus, to obtain the highest return on investment in the classroom technologies, it will be beneficial to 1) educate faculty about how to effectively use the technologies and 2) ensure that faculty have access to a classroom technology infrastructure that is reliable and supportive.

3) Teaching Online

Just under half of the Muskegon Community College faculty have experience teaching online in some capacity (46%). However, one-third of faculty report having no experience at all (see Chart 7).

Chart 7.

Faculty Experience – Teaching/Developing Online, Hybrid, and Blended Courses



Of those faculty who indicate that they have taught or developed a course, we asked about their experience with each type of course (see Chart 8 and Chart 9). Faculty report the least amount of experience teaching and developing hybrid courses – for example, 45% have not developed a hybrid courses and 41% have not taught a hybrid course. And among those faculty who do have experience with hybrid courses almost all have only taught or developed one or two courses. In contrast, some faculty do have experience developing and teaching three or more blended and completely online courses. This pattern may be a result of the hybrid type of course being new to Muskegon.

Chart 8.

Courses Developed

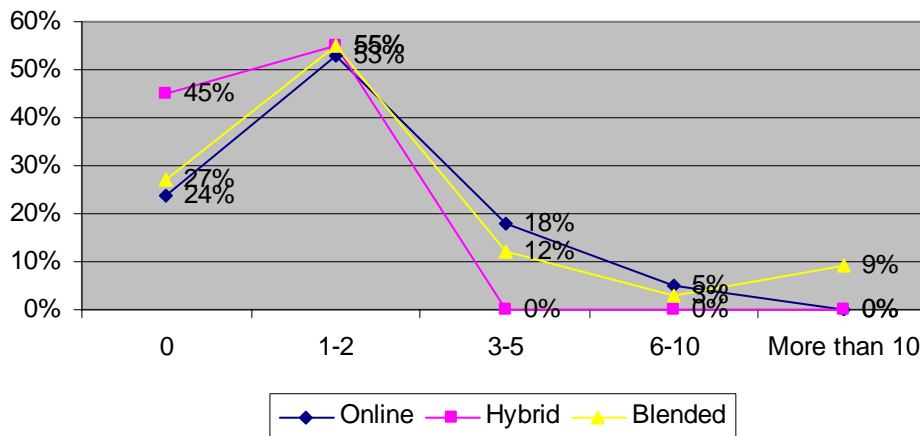
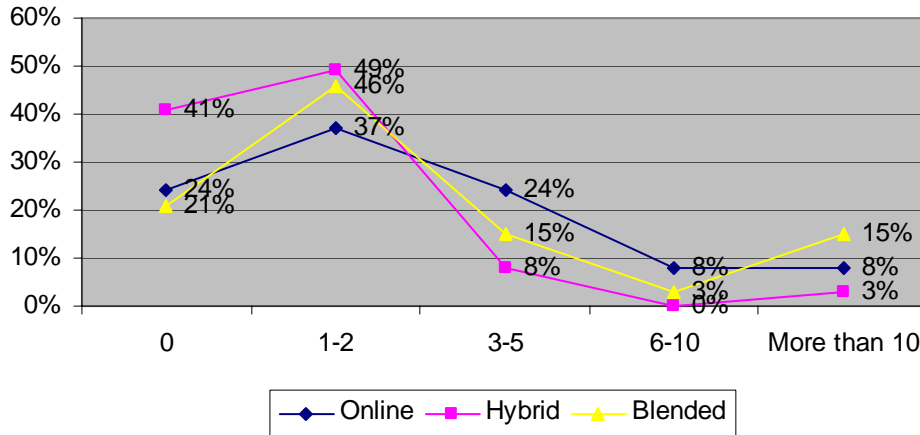


Chart 9.

Courses Taught



Faculty do show some apprehension about teaching online, hybrid and/or completely online courses. When asked about concerns or reservations they had about teaching online, many faculty indicated that the time to develop courses and their own lack of experience were primary obstacles. However, others articulated their concerns around a loss of quality associated with teaching online due to a loss of the personal, face-to-face interaction that many find critical to successful learning. For example, some faculty reported:

- *I do not believe in the efficacy of the completely online classroom....I remain unconvinced that the fact that they [students] WANT such courses is proof that these courses teach content as well as or better than traditional classroom courses, and to this date there is NO convincing research to prove otherwise.*
- *I think that online courses are, in general, inferior to on-campus courses...only real-time interaction between students, all the students, can help facilitate learning in a discussion.*
- *Not enough face to face contact with the students*
- *Thus far, they have not been shown to a better form of instruction than the face to face method.*
- *Student interaction is more limited than it would be face to face.*

Based on these comments, it is recommended that initiatives that support online instruction at Muskegon Community College be based in research that illustrates how online teaching/learning can be pedagogically-sound. It seems that the presentation of such research and related best-practices would benefit some faculty who have doubts about the quality of online instruction.

It is also important to note that most faculty reservations do not appear to be centered on a particular type of online instruction. That said some faculty may be more convinced that blended and hybrid approach would work best given these techniques do not eliminate the face-to-face interaction that many faculty feel is necessary for successful teaching/learning.

Efforts to increase and/or improve online instruction at Muskegon Community College should address faculty beliefs that traditional classroom learning is superior to online learning in their particular discipline. To illustrate, when faculty were asked about concerns or reservations they had about teaching online, some replied:

- *How does one complete a biology lab online?*
- *Remedial reading cannot be taught this way*

- *Does not fit well with physical education*
- *I haven't yet seen a good program for the teaching of mathematics online. Most of the technology is fine for words, but to enter equations, formulas, or anything else involving mathematics is a major pain.*
- *...Since I teach primarily entry-level computer courses I worry about students being allowed to take a completely online course. If they have few or no computer skills they may be setting themselves up for failure...*

While these are valid issues and they should be acknowledged, discipline-specific concerns such as these can be addressed by providing best-practice, discipline examples of successful online teaching/learning to faculty.

Finally, regarding Blackboard use for online instruction, almost all Muskegon Community College faculty with experience teaching online had used Blackboard (90%) and their self-report skill with the different features of Blackboard vary. For example over half of faculty (53%) report that they are beginners or never use the Blackboard assessment tools compared to only 29% of faculty indicating that they are beginners or never use the course management area and only 29% reporting that they are beginners or never have created content for Blackboard. Over 80% of experienced Blackboard users indicate they are at least somewhat interested in learning more about creating content, using the communication tools, using the assessment tools, and managing the course in Blackboard. And 86% of all faculty, including those without any experience teaching online indicate they are at least somewhat interested in learning more about the tool.

The highest level of interest among all faculty appears to be in the area of developing and teaching blended courses (76% report they are at least somewhat interested in learning more) and hybrid courses (74%). Fewer faculty (63%) indicate they are at least somewhat interested in learning more about developing and teaching completely online courses. This pattern reflects faculty concerns about the loss of face-to-face interaction associated with online courses. However, even with some level of faculty concern, interest in learning more about these technologies still exists at Muskegon Community College.

To respond to faculty interest, training in the area of online instruction should be developed and delivered. In reference to online teaching, one faculty member said "I'd love to be able to do this if there is a constant technical advisor to assist with the program." Comments such as this one indicate that faculty may be more responsiveness to experts in the field of online teaching/learning. Muskegon Community College may consider ways to draw attention to campus experts (experienced faculty and instructional technologists). Most faculty report that "support and encouragement from departmental colleagues" (76%) and "campus-wide training/support provided" (69%) are factors that encourage their use of technology for instruction.

One final note – throughout the open-ended comments on the TTNA, some faculty reference the lack of student technology experience and lack of student access to technology as obstacles to teaching online. Other faculty report that the administration is supporting online teaching and learning due to a "perceived desire or need in our student body". Still other faculty indicate that students need or enjoy technology and the convenience it provides. Muskegon Community College may want to consider an assessment similar to the TTNA and ATNA for students. This sort of assessment would provide data to examine how Muskegon Community College students use technology, their level of expertise with technologies, their level of access to technologies, and their interest in using technology for learning at MCC. An example of such an assessment is the Learning with Technology Needs Assessment (LTNA) offered by SunGard Higher Education.