m-Learning Questions
KVCC Mental Health Program
TAACCCT IV Grant

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1) *Why use technology, specifically tablet based technology, to deliver an Associates of Applied Science in Mental Health, or to deliver a Certificate Program in Mental Health Rehabilitation Technician - Community (MHRT-C)? Does it enhance outcomes better than a face-to-face program would? Here we are not talking about the ability to reach a wider audience, but specifically is there a proven enhancement of learning, acquiring skills and delivering those skills to the work place with the use of tablet based technology.*

Providing distance learning opportunities for students to acquire their Mental Health Rehabilitation Technician / Community certificate has been a part of the Mental Health program for over 10 years. Dr. Kavanaugh, the KVCC Chair of Social Sciences, taught his first online Mental Health course in the Spring of 2006. A principle deliverables of the TAACCCT IV grant is to increase the capacity of the Mental Health program. To this end we have enhanced the course materials to bring the content up to date as to current practice in the field of Community Mental Health and to enhance the learning materials with additional multi-media components, reformulated assessments, and a greater alignment between the online course materials and those being used in our face-to-face courses.

The goal for enhanced and impactful online course materials is not in any way proposed as a replacement for our face-to-face classes. The online course materials have been developed so that they are applicable to both online and face-to-face delivery (even hybrid delivery if we chose to offer that option). The goal in the alignment of these materials is to ensure that the online and face-to-face versions of the program are as identical as possible. This process of review and updating is in line with the New England Association of Schools and Colleges Commission on Institutions of Higher Education (NEASC) Guidelines for the Evaluation of Distance Education (On-line Learning).

The m-Learning initiative does not represent an alternative delivery modality. It is a

technological enhancement to both the face-to-face and online classes that mirrors the expected

technological landscape of the field. However, aside from the development of specific skills

related to mobile devices, technological enhancements in general are seen as having specific

advantages in education.

In 2007, John Page wrote an article titled "The Ten Fundamental Reasons for Technology in

Education" for the Tech Learning e-magazine. Both the m-Learning iPad-based initiative and

the use of online course tools are advantageous to our students in the following ways:

1. **Expansion of time and space.** Typically, a student has access to a teacher and the
   course materials in a class during the scheduled class time. Through the use of
   technology, students have access to all the course materials all the time. They also have
   access to advanced communication tools that enable the student to reach out to the
   teacher and receive feedback or assistance in-between class meetings.

2. **Depth of understanding.** While multimedia does not necessarily enhance retention or
   learning, it can provide the opportunity for a greater depth of understanding of concepts
   by portraying those concepts in the form of graphics and other media. This format of
   materials also provides for greater choice for students who have different learning styles.

3. **Learning vs. Teaching.** Technology allows the tables to be turned on this relationship.
   Traditional teaching places the teacher in the position of "pushing" information at the
   student. Technology allows for students to seek out and "pull" information to
   themselves. The key to this is that this process does not have to be in the presence of the
   teacher! The project-based pull approach makes learning far more interesting for the
   student.

4. **New media for self-expression.** Traditional assignments such as tests and papers remain
   excellent forms of expression. Technology allows for additional methods of expression
   including presentations, recorded voice, video, multimedia, websites, blogs, radio,
   animation, etc. These options allow instructions to design more engaging and authentic
   methods for measuring student learning. For example, a student who is asked to describe
   how they might react to a specific comment from a client could record or video
   themselves enacting the response.

5. **Collaboration.** Tools such as computers and applications encourage collaboration. This
   is particularly true when all the members of a given team are working on the same
   platform with the same applications. Collaborative work on assignments, formerly

known as "cheating", is becoming the model for productivity in many areas of our economy.

6. **Going global.** Technology provides students with the ability to communicate (text, audio, or video) with virtually anyone in the world. This provides the opportunity to develop a broader world view. Specific to mental health it allows for a greater appreciation of the impact of culture and technology itself on mental health.

7. **Individual pacing and sequencing.** Students are all different. Some like to process course information in the sequence set by the teacher. Others like to jump around in the material by working ahead and looking back on previous work in the class. Our online materials are particularly well suited for this. On the first day of the course the students have access to all the course materials and assessments for the entire semester. In some ways they can even work ahead on some items (certainly on reading) and tailor the class experience to their time demands.

8. **Weight.** Three textbooks and binders can weigh in excess of 25 lbs. Technology allows much more information in a much more portable format. A 40 GB hard drive can hold over 2 million pages of illustrated text. A laptop can weigh about 5 lbs. and an iPad mini 4 weighs a mere 0.65 lbs.

9. **Personal productivity.** Students need productivity tools to write, read, communicate, organize, and schedule their time…so do people in the workplace. Having a computer or tablet provides for a portable and personal tool to engage in these activities.

10. **Lower cost.** It is not unusual for a textbook to cost over $120 and in community colleges, they can cost more than the tuition itself. Technology allows teachers and students to utilize free education tools available on the web. With the emergence of Open Educational Resources, these materials are becoming increasingly valid and appropriate for college level work.

These ten reasons are from J. Page, 2007. Our Mental Health Program m-Learning Implementation Team also has built a relationship with staff in the Higher Education division of Apple. Ian Camera, ND, RN, Higher Education Development Executive stated via email that "being able to record analysis and reflection regarding cases, theories, and documents is crucial to the development of clinical judgment and therapeutic communication. The touch screen and built in microphone on an iPad do this simply and effectively, for hundreds of dollars less than

the cameras, mics, and L.E.D. Illuminated glass "white boards" that some campuses build for the same purpose. Pedagogical research supports the constructivist approach, which requires students to create things based on the knowledge and skills they are requiring. iPads allow many different kinds of creation that would be much more complex and harder to learn on a laptop or desktop (video, mind map, narrated slide show, etc.)."

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2) *How is mobile technology particularly well-suited, above other technologies, or a hybrid class, or face-to-face learning for teaching and learning about mental health and counseling practices?*

Having addressed the use of technology in Question 1, this question may be best approached by a number of angles. Given that "technology" in general can be advantageous in teaching and learning:

a) Why develop a 1:1 technology program? (A 1:1 program is where each student has their own device such as a laptop, tablet, or microscope).

b) Why is a tablet better than a laptop computer?

c) How does the implementation of a 1:1 technology program impact the teaching of specific mental health and counseling practices?

2a) Why develop a 1:1 technology program?

Technology has been widely used in education for 100's of years. Consider that technology ranges from a pencil to a computer. Just as with the pencil, it has been long understood that everyone in a classroom benefits when everyone has their own tools. If a student has to share a pencil in the classroom we would expect this would interfere with the learning process. If we then introduce a small set of tablets or laptops that need to be shared we could expect a similar interference with learning. This idea can even apply to science education around microscopes, dissecting tools and lab supplies.

Specific to 1:1 computing, Sauers and McLeod (2012) discussed the claims that have been made that 1:1 computing has had no positive impact on student achievement, there are many more cases that support the academic benefits of one-to-one computing. Improvements in writing, literacy, science, exam scores, and GPAs all have been noted in various studies. The state of Maine, which implemented one-to-one computing statewide in their middle schools in 2002, has seen significant improvement in writing scores on their statewide tests (Silvernail & Gritter, 2007). The same study also found that the more extensively students used their laptops, the better they scored.

Other studies that also support this benefits of one on one computing include Lowther, Ross, and Morrison (2003) who found one on one computing programs resulted in positive impacts on student writing scores and problem solving. Suhr, Hernandez, Grimes, and Warschauer (2010) found that students with laptops outperformed their peers in the control group in literacy response and analysis as well as writing strategies. Shapley et al. (2006) found that access and use of technology was a consistent, positive predictor of students' reading and mathematics scores on state achievement tests.

In addition to the research examining student achievement, researchers have reviewed other areas that have been positively impacted by one-to-one computing. These impacts fall into a number of various categories, including student engagement, attendance, behavior, and motivation as well as teacher practices. The study by Drayton, Falk, Stroud, Hobbs, and Hammerman (2010) emphasized the importance of professional development in the implementation of one-to-one programs.

We need to be aware that the research also indicates that simply adding a digital device to a student's tool set without a fundamental change in the culture of the classroom and in teaching

and learning will not lead to any specific or significant changes (November, 2013). When each student has their own device in combination with clear teaching and learning goals integrated into the development of the program this can inspires a new kind of learning community and the opportunity for significant change arises.

2b) Why is a tablet better than a laptop computer?

According to Ed Hardy (2014) "many students assume they need to buy laptops during back to school season. This is a mistake because a tablet is often the superior choice."

Hardy cites that modern tablets have advanced to the point that they are as powerful as or more so than many laptops at their price point. The "shift" was when Microsoft Office for iPad was released. This was a game changing event. This placed Microsoft's flagship productivity suite into the hands of millions of iPad users and turned the "gadget" into a serious productivity tool. Students who work with file formats like .docx, .xlsx and .ppsx can now do so on their tablets and have their documents move seamlessly between their tablet and other computers that run Microsoft Office. Hardy further cites that inexpensive laptops are not an answer either. These computers are often under powered and sluggish when compared to tablets.

Other specific research related to tablets vs. computers include a study by Kanematsu and Berry (2015) who reported on the expanded use of tablet applications (apps) to develop STEM course activities. Habler, Major, and Hennessy (2016) conducted a meta-analysis of 23 relevant studies, 16 reported positive changes in learning outcomes, 5 reported no difference, and 2 reported negative learning outcomes after the implementation of tablets in the classroom. Overall the evidence as to the impact of tablets in the classroom is mixed, but favors a positive impact.

2c) How does the implementation of a 1:1 technology program impact the teaching of specific mental health and counseling practices?

The practice of mental health services is changing rapidly. With changes in reimbursement policies and research on the connections between physical health and mental health, mental health work is becoming more engrained into the wider scope of medical and health practices. To this end, the delivery modalities for mental health services need to be modified to take into account many aspects of practice in the medical and general health fields, including technology.

The National Council for Behavioral Health (NCBH) identified the increased use of mobile devices and wearables in the tracking of health related statistics. They reported on the participation of nineteen organizations who attended the NCBH Technology Learning Community. These participants explored how to expand and embed smartphone apps into physical healthcare at behavioral health settings. One example shared was the use of the Tactio Health App on Apple devices and Withings Health Mate on Android tablets as supplements to counseling group meetings, one company reported that the technology increased consumer satisfaction with treatment. Experiences like this example indicate that mobile apps have great potential for enhancing patient's care experiences, especially when used in tandem with group meetings, to create a more supportive team environment (Cohen, 2016).

Mobile devices, and specifically iPads, are making their way into on the street applications in human services. In January 2015, Delaney reported on statetechmagazine.com about a program initiated by the Massachusetts Department of Children and Families. Following a successful pilot program, the Department issued 2,400 pre-configured iPads to caseworkers in 34 field offices. The report states that caseworkers spent a great deal of time traveling back to their offices to do case notes. These are now done on the iPads and the caseworkers are much more productive.

Their implementation of this program for caseworkers in Massachusetts resulted in the

elimination of multiple trips to the office, increased communication by email, quick access to critical information, easy documentation of home visits (notes, photos, videos), timely completion of forms and increased use of video conferencing. One of the caseworkers reported, "Now that I have an iPad, I have more time to get done what I need get done" (Delaney, 2015).

Through email communication Ian Camera, Development Executive in the Higher Education division at Apple reported (2016), "People in mental health and human services need to record, analyze, and reflect on human interactions. …This is much more complicated and more expensive on any other platform. In addition, it is dependent upon hardware and dedicated studio spaces which eliminate or severely limit the 'mobile' option altogether."

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3) **3a) What is unique to the mental health field that suggests mobile technology as a superior tool for teaching and learning? 3b) Why KVCC is especially suited for M-Learning? Is there a specific linkage to a rural population benefiting from tablet based learning? 3c) Why mobile devices and not simply software solutions available on desktops and laptops?**

3a) What is unique to the mental health field that suggests mobile technology as a superior tool for teaching and learning?

The KVCC Mental Health Program has added mobile technology to the curriculum. It is not considered superior to other teaching methods. Currently the classes are still being led by an instructor face to face or by an instructor through the Blackboard Learning Management Systems (LMS). The courses also include some lessons that incorporate tasks to be completed on a mobile device specifically. Mental Health services, significantly different from most of the jobs that are available for our students in our allied health programs, are largely delivered in clients' homes. Case managers rarely work in hospitals, clinics, or even group homes. They are on the road visiting clients in their homes and delivering services directly where they live. There are

trends in the field that there will be an increase in mobile technology in the mental health care field in the future. We are working to mirror what the work may look like in the future.

Learning to navigate a mobile device, which functions differently than a traditional computer or laptop, requires patience and practice. We believe the best time to practice a new skill is during the learning process when you have support through the process.

There is research indicating there is an increased presence of mobile devices in the health care workplace that are opening up new opportunities for delivering health information and care in a more efficient and personalized manner (Gaggioli & Riva, 2013). As these mobile devices continue to appear in the health care work place, some of the reported benefits improved patient-physician interaction, increased access to healthcare services, higher treatment compliance and cost savings due to reduced needs for hospitalization and intensive care. Considering these advantages, it is not surprising that the number of mHealth users (mobile technology integrated into medical health care) has increased exponentially over the past few years. In 2011, 17 percent of U.S. adults were using their phones to look up health and medical information; in the same year, 44 million health applications were downloaded" (Gaggioli & Riva, 2013, p. 141).

The Department of Veterans Affairs (VA) is using innovative mobile technology to meet its goal to improve access to care and services for Veterans. In particular, the VA recognizes that mobile technology and devices are emerging as an essential element of health care, and has decided to provide the most up-to-date technologies to enhance patient experiences. They have acquired 5,300 iOS devices, 100+ android devices and 10,000 + BlackBerry devices in their integration efforts (Department of Veteran Affairs, 2014).

Research was conducted by Luxton, McCann, Bush, Mishkind, & Reger (2011) that indicated there will be future widespread use of smartphone technology in the behavioral health

field. Our current clients and their families are becoming increasingly mobile, tech-savvy, and health conscious. This is creating a consumer base who will demand care delivery solutions that expand beyond traditional office-based requirements. Integrating mobile technology into mental health care has the potential to make behavioral health care more accessible, efficient, and interactive for clients and can improve the delivery of evidence-based treatments.

There is emerging research in the mental health field where mobile applications are being used to offer cybertherapy, behavioral treatments and self-care (Department of Veterans Affairs, 2011; DePompei et al., 2008; Depp et al., 2010; Heron & Smyth, 2011). There are benefits and risks to the incorporation of mobile applications in the field of mental health when applying it directly to the care provided to consumers. The incorporation of this technology is also giving us a base to have discussions about the risks and potential ethical dilemmas which may arise for mental health practitioners who embrace this technology in their practices (Giota & Kleftaras, 2014). These applications are the start of a new focus within the field to provide services to clients using mobile platforms. The more we can prepare our students for this emerging trend within the field the better prepared they will be for the workplace of the future.

3b) Why KVCC is especially suited for M-Learning? Is there a specific linkage to a rural

   population benefiting from tablet based learning?

Barriers to mental health care in rural areas include lack of availability, accessibility, acceptability and affordability. Individuals who live in rural areas suffer from chronic shortages of mental health professionals who may not be available, accessible or affordable. The individuals may not have the knowledge of how to navigate the mental health system, may not have the insurance coverage for mental health services or may need to travel long distances to

receive services. There are also harsh stigmas and limited anonymity in rural areas which may reduce the likelihood of an individual seeking services (APA, n.d.). The rapid growth in the use of mobile device applications (apps) provides the opportunity to increase access for individuals in rural locations to receive evidence-based mental health care (Donker et al., 2013).

Technology has the potential to decrease the gap in services and improve education, support, and connectedness between the client and the provider. As an alternative to traditional face-to-face contact for those in rural and geographically dispersed areas, the internet potentially can bridge the disparities in health care access for rural mental health services (Farrell & McKinnon, 2003).

We are training our students to work with individuals who are living in their communities, which may be rural in our region of Maine. The primary employment location for MHRT/C's is community integration. Our students will be working with clients living in the community who have serious mental illnesses. Research has shown over and over that lack of continuity of services and support places the individual at risk. The consumers may be at risk for losing or becoming disconnected from stable housing, unstable employment and/or challenges locating appropriate support services (Farrell, Koch, & Blank, 1996). For clients who live in rural areas, technology has the potential to decrease gaps in services, improve the connections between the consumers and service providers, and provide an alternative to traditional face-to-face contact (Farrell & McKinnon, 2003). Ian Camera, of Apple, provided some insights on the regarding the benefits of the iPad in rural locations via email communication (2016): "Rural areas have been traditionally poorly served by technology. The iPad is easy to learn for people who don't have a broad experience with computing, and runs well when folks have only intermittent access to the Internet. I say that, of course, because of the emphasis in iOS on native

apps which update themselves whenever they get the chance, which are much better at handling intermittent Wi-Fi than traditional browser-based tools and web-apps are."

3c) Why mobile devices and not simply software solutions available on desktops and laptops?

This specifically addresses the issue of mobility. A tablet device is much easier to use when working in the community with clients than a laptop or a desktop computer. While many of the assignments we are requiring our students to complete could be done on a laptop or desktop the use of the mobile device provides an opportunity to practice navigation skills on a device many may see in the workplace in the future. A device that is much more portable and easy to learn and navigate. Learning with a mobile device is a learner-centric activity because it is both mobile and nomadic, and not pedagogically teacher-centric as in the case of traditional lectures and hardware installed in one particular location under the oversight of the educational institutions' rules and schedule (El-Hussein & Cronje, 2010).

Mantell (2012) found that as tablets inundate the consumer market there will be an increase in innovative app development and cloud-based platforms. This could result in the phasing out of laptops and personal computers in the workforce. The Apple iPad presents itself as the clear favorite among consumers and professionals with a nearly 90% customer satisfaction rating. Organizations who have already integrated the iPad into their operations have noted reduced paperwork and increased revenue and employee productivity. This continues to reinforce that tablets, and specifically iPads, will become an even greater presence in various capacities in the workplace.

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4) **_Why the iPad above other tablet technologies? This question is not addressing the issue of cross platform institution of any particular program – rather it speaks to why is iPad superior to say android tablet technology._**

5) *How was the iPad chosen? What were the considerations used to determining which technology / device would be best suited for delivery of this particular program? What other devices / technologies were considered and how was the iPad determined to be the best way forward at this time?*

In our assessment of Questions 4 and 5 we felt these two questions were similar so this section will address them together. Given that we have addressed the issue of technology and, specifically, mobile technology's advantages in teaching and learning as well as its benefits in rural locations, we will now explore the question of why we chose the iPad vs. other tablets.

In many ways a number of tablet platforms could have been equally suited to the m-Learning Initiative. A number of different platforms, including iOS/Apple devices, Android devices and Windows based devices are being used in the workplace, the medical and mental health fields and in education at all levels, including higher education. The use of any of these platforms in the classroom could potentially be very beneficial to students.

When the initiative was first being investigated, Dr. Kavanaugh was exploring classroom technologies that more closely mirrored the technologies that are becoming prevalent in the workplace. He understood the advantages of having advanced 1:1 technology in the classroom and that mobile technology would be the most affordable way to go. In addition, he also understood that in order to incorporate the technology into the teaching there was going to have to be a universal platform that everyone would use. This is the same decision that goes into having all students use the same textbook, use the same file format for assignment delivery, and use a single Learning Management System (Blackboard). It is not always that the choice is the objectively best way to solve the instructional problem but it represents a collection of decisions that lead to the determination of what the best platform should be for the situation.

We are taking on the task of teaching our students how to use mobile devices as a stand-alone set of objectives. When we teach computer classes we usually round up our students into a

classroom full of the same kind of computer running the same software so that the teacher can walk students through the process of learning that specific computer and that specific software. We make the assumption that the skills they learn on our system will be generalized to the specific hardware and software solutions they will be exposed to when they leave Kennebec Valley Community College (KVCC) and go home or into the workplace. The principle is that if we are going to teach students how to use a device, we want them first to be all on the same device using the same apps. The list below includes items that were considered as part fot he decision to go with Apple iPads vs. any other device or platform. We needed to explore the use of a single device in the classroom with lots of options for productivity apps and field specific apps. Here are points related to the choice in device.

- o iPhone and iPod
  - Pros = Versatile and very portable; Price
  - Cons = Small screen; iPhones could not be purchased without a phone plan (at the time)

- o Android Devices
  - Pros = More accepted among many people; Devices are more diverse and less expensive
  - Cons = Very little possibility of unified instructional experience due to diverse device install; Different operating systems on different devices

- o Chrombooks
  - Pros = Full laptop experience; Cloud Apps; Inexpensive
  - Cons = Less portable; No access to standard office apps such as MS Office; Poor memory (most memory is cloud based and this challenges the use of the device when one is in a rural setting)

- o Apple/PC Laptops
  - Pros = More powerful processors, speed, and memory; Full laptop experience
  - Cons = Expensive; It would be hard to manage the shared learning environment unless we mandated a specific brand and model

In the end, the selection of the iPad was based on a number of significant factors. The first

factor considered was building on the cross-platform objectives of the TAACCCT III grant initiatives, KVCC has developed a number of resources and internal expertise that is specific to the iOS platform. We would have had to develop these resources and internal expertise if we had chosen to embrace an alternative platform. The next factor considered was that the goals within the TAACCCT III grant supported both Android and iOS platforms. iOS was included in the grant because of its "wide spread distribution and needed technical support among the school districts in Maine. Many AECT grads have gone on to tech support positions in school districts" (William Dolan, 2016). Another consideration was that Android OS, developed by Google, is largely modified by each device manufacturer. This means that the look and feel, and some of the functionality and compatibility of apps, differs from device to device in the Android world. This has led to a great deal of competition among device makers that emphasize different hardware features and specific apps when compared to alternative devices.

iOS is essentially a closed system. While this allows for less availability of "off-site" apps (apps not supported by the official App Store managed by Apple) it does standardize the user's experience. It is also considered a more stable operating system than its competitors. The iPad has a very good resale price point if students want to sell their device after they are completed their work at KVCC. The integration of cloud services by Apple is superior and provides a superior user experience.

Apple has a deeper and much longer investment in Education than Google. Apple provides a superior degree of support for educators who wish to incorporate their devices. Apple has created apps to manage media (iTunes), books and written materials (iBooks) and a learning management system (iTunes U). These applications provide extensive opportunities for the KVCC faculty to develop creative, interactive and innovative teaching materials, creative

projects and resources for our students. We have integrated iTunes U, the free learning management system, into all of our mental health courses to streamline the download of the specific applications we want our students to use. iTunes U is also continuing to expand its functionality. The app developers have integrated a number of applications that enable students to submit work directly to their iTunes U course assignment drop box from within the app. This is a feature we are going to be exploring in the Fall of 2016, and if successful, implementing in more broadly in the Fall of 2017. iBooks allows for the creation of our own multi-touch eBooks that will be featured in the new curriculum we are developing. Using the free iBooks Author application, we are able to create stunning interactive books based on our own content.

As a final piece of evidence, Kevin Casey, Dean of Technology at KVCC states, via email, the following: "It's my belief that Apple is a much stronger player in the educational (market) than either Android or Windows. They work hard to get their hardware into the K-12 environment, but – more important – more app developers create educational content for iOS than for other platforms. Chromebooks are gaining market share (probably because of their relatively low cost), but the app title count still holds in Apple's favor" (Kevin Casey, 2016).

Ian Camera of Apple stated in his email correspondence (2016) with the implementation team that laptops are much harder to take out into field placements. They create a barrier between the clinician and the client when they are used, and the software they run is complex and confusing to many students. The battery life and screen quality on an iPad is far superior to all but the most expensive laptops and desktops, making them a better choice for students who spend many hours a week on their studies across many settings. The iPad is "on" from the second it is opened, even when protected by Touch ID, while laptops do not offer the same security and speed. The Android system is severely fragmented. It is very difficult to develop, test, and

deploy good quality software to the thousands of device and operating combinations which exist in that world. Also, iOS is doing very well in the clinical world because of the combination of ease of use and security, including encryption on the device, at the level of the apps, and in the network connections. Students who are comfortable on iOS will be ready for the iPads they will encounter in more and more clinical sites.

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6) ***Apple produces proprietary products that link poorly with non-Apple devices or other platforms, often requiring the user to purchase other Apple products or limit themselves to Apple-based solutions. How does the M-Learning Initiative overcome these proprietary constraints? Is it not possible to achieve the same result with other devices or with multiple platforms?***

While it is true that Apple produces proprietary products, it is not true that they link poorly with non-Apple devices. There are many examples of how the system has become more inclusive and added the ability to integrate with other systems. All iOS devices can be managed through the iTunes and Apple website on Windows and Mac computers. iOS devices can access all proprietary Wi-Fi and wireless networks. iOS devices can read every form of eBook on the market including other proprietary formats such as Kindle, ePub, and Nook. Devices such as the Kindle Fire cannot open Nook books nor can they open iBooks. Only the iPad can open all of the various book formats. The MS Office suite of apps on the iPad is fully compatible with MS Office for Windows and MS Office for Mac. The word processing (Pages), spreadsheets (Numbers) and presentation (Keynote) apps on the iPad have the ability to convert the file into any other format including Word, Excel, PowerPoint and PDF formats.

There are also some shared problems that would come about no matter what mobile solution we decided to use. Both Android and iOS are challenging to use with our Learning Management System (Blackboard). This is an issue with Blackboard itself. The Blackboard Learn app is

highly under developed. Printing is largely limited to printers that are on a wireless network and accessible to the device, or by emailing your print project to a device connected to a printer. We are hopeful in the future there will be one or more wireless printers available to support more of the wireless devices, including tablets and laptops that are used by our faculty and students. The "typing on glass" nature of mobile devices is similar across platforms.

Some of the proprietary features of the iOS devices are clearly advantageous. There is a very robust suite of apps available for use with the iPad. As of March 2016 there are over 1,000,000 apps available for the iPad alone (Costello, 2016). The presence of Apple Airplay allows our faculty and students to stream assignments, presentations and videos to an Apple TV located in the classroom through the mirroring functionality. None of the other devices offered this type of functionality. The Airdrop feature has allowed our students to share large files, images and videos with their peers and their instructors without having the file size restrictions usually encountered when transferring large files. We have already shared with you the opportunities that are opened up by being able to access the iTunes U application and iBooks. Ian Camera of Apple indicated that Apple has enterprise-level partnerships with IBM, Cisco, and SAP. Microsoft and Adobe were launch-day partners with Apple for the iPad Pro in October 2015. All the major cloud storage solutions and productivity suites (Apple, Google, Microsoft, etc.) have a strong presence on iOS, and combine well with 1.6 million apps (80,000 of which are specific to education and the iPad) that are only available on the iOS platform.

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7) *Is there a proven link between the institution of a tablet based learning program and increased employability for participants?*

One of our hopes is that the presence of the mobile technology will increase the engagement of our students in the work that they do with us. They will have access to all of their course

materials during their time with us as well as after they leave. This will allow them to access their resources as they enter the workforce. There will also be opportunities, through the use of technology, for the student to video record their interactions which could also be used to demonstrate to future employers their expanded skill sets.

West (2013) reported that "technology-rich activities can sustain high levels of student engagement and peer collaboration compared to less technology focused activities. Educators need to figure out how to harness mobile platforms for instructional purposes and employ them to boost educational learning". West's data indicated that 52% of students in grades 6-12 believed that having access to a tablet computer is an essential component of their schooling and 51% of school administrators agreed with these students. Our educational system is currently educating the next generation of professionals. That workforce needs to be adaptive as jobs and roles evolve. Mobile learning makes it possible to extend education beyond the physical classroom. Students can access their materials from home, communicate with teachers, and work with other people online. The value of mobile devices is that they allow students to connect, communicate, collaborate and create using rich digital resources (West, 2013).

Our program has specific program outcomes and we are using the mobile platform to help us accomplish some of these. For example as we ask students to demonstrate knowledge of the formal and informal support systems in the community they are using their mobile devices to research formal and informal supports in the surrounding communities. This type of activity will mirror how they could use this device in the future once in the workplace. Another example is when we have students involved in collaborative projects with each other, their peers, we are mirroring for them how they can collaborate with colleagues in the future using face to face as well as electronic means to communicate with each other. They can email, send text messages

and use video conferencing (Facetime; WebEx) with their peers as they complete their academic coursework.

The integration of mobile technology in the classroom also connects to KVCC's Essential Learning Outcomes (ELO's). Clear communication orally and in writing is crucial in the field of mental health. It is also a KVCC ELO: Communicate clearly, effectively, and persuasively in both the written and spoken word. We are using the iPad to have students record their presentations on video to share their oral interaction skills. They are using the device to practice writing treatment plans, client summaries and case notes. The device allows them the ability to easily share their writing with their peers, their instructor and during class time through the use of the AirPlay and Airdop features. Another KVCC ELO is to utilize resources and technology as lifelong learners in pursuit of both their personal and professional goals. By introducing various types of technology during the educational process we are hopeful that we are preparing them to use technology as part of their future personal and professional lives.

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8. ***How will results from your implementation of the program be measured? Since you do not have a control group – how will the performance of students in the program be measured and what standard will it be compared to?***

Based on the evidence in the literature, technology can have a positive impact on student engagement through active and collaborative learning activities. This initiative ventures to answer a number of research hypotheses related to the impact of m-Learning in the Mental Health program. The KVCC m-Learning hypotheses include the following:

1.	Student/Faculty perceptions of the ease of use of the iPad will increase over time.
2.	Student/Faculty perceptions of the usefulness of the iPad will increase over time.
3.	The iPad will positively impact perceptions of learning for students and faculty.

4. The iPad will positively impact perceptions of engagement for students and faculty.

5. The iPad will increase 1:1 interactions between faculty and students.

6. The iPad will increase 1:1 interactions between students and other students (assessing collaboration).

7. The iPad will positively impact the quality of work submitted within the program's Special Assignments.

8. The iPad will positively impact a student's preparation for the technology they may encounter in the workforce.

These are the metrics incorporated into this initiative:

1. **Student First Week Survey**

This survey was administered during the first week of the Spring 2016 semester to address a number of immediate questions. Those questions included the following:

- o What is the status of iPad ownership among students?
- o Plans for acquiring an iPad?
- o Support services used by mental health students before and after initiative began.
- o This instrument will be used to gather data for hypotheses 1 and 2

2. **Learning and Engagement Survey (adapted from Diemer, Fernandez & Streepey, 2012; Davis, 1989).**

This instrument will be used to gather data to address hypotheses 1, 2, 3, and 4. The

goal will be to administer this instrument twice per semester. Due to the implementation of the

program and the administration of the student first week survey this survey was administer once

in the Spring 2016 semester. The implementation team is hopeful it will be feasible to

administer it twice in the Fall 2016 semester, around mid-terms and then at the end of the

semester. It will be offered through an online survey tool. The questions will be asked of both

students and faculty. The list of Learning and Engagement Survey question can be found in

Appendix A.

3. iPad Incident Report

Since there is an awareness that the implementation of the m-Learning Initiative would

impact other departments at KVCC the iPad Incident Report Form was created. This document

has been designed by the Mental Health Program faculty to capture quantitative and qualitative

information related to interactions between faculty, staff and students regarding the m-Learning

Initiative. Copies of this form were distributed to the KVCC community including Student

Services, Learning Commons and Library, Information Technology, and to all Mental Health

faculty. Staff and faculty have been encouraged to use this form to document interactions with

students regarding the iPad/Apps or any other aspect of the m-Learning Initiative and to forward

those forms to the Mental Health Program staff at the end of the semester. The data collected

from the iPad Incident Reports will be used to address hypotheses 5 and 6. A copy of the iPad

Incident Report form can be found in Appendix B.

4. iPad Integration Discussion Board

Embedded within each of the MHT course Blackboard class page is a discussion section

dedicated to information and interaction related to the m-Learning Initiative. The discussion

board is labeled: iPad Integration Discussion Board. It is an open discussion board that provides

students and faculty an opportunity to interact together regarding the m-Learning Initiative

implementation for that particular class. This discussion board can be used to field questions and

provide support for the initiative. Qualitative data collection and analysis will be collected from each of these discussion boards at the end of the semester in order to address hypotheses 5 and 6.

5. Learning Outcomes

In an attempt to explore if the m-Learning Initiative is having an impact on Learning Outcomes we plan to review a set of assignments that have been standardized across the Mental Health Program. These assignments, referred to as "Special Assignments", have been mapped across the entire program curriculum and serve to teach and assess material related to the KVCC Essential Learning Outcomes (ELO's). Additional assignments have been mapped to address General Education Learning Outcomes as indicated by the American Association of Colleges and Universities (AAC&U) VALUE outcomes.

These assignments were selected as part of the assessment process because we have pre-initiative data on students' learning outcomes from previous semesters. This will allow us to compare learning before and after the implementation of the m-Learning Initiative. Some of the assignments were specifically modified in the Spring 2016 semester to take advantage of the tools associated with iPad. These will be of particular interest as they directly engage the student to utilize the device to complete the assignment. You can find a list of the Special Assignments in Appendix C. This measure will be used to address hypothesis 7.

6. Pedagogical ROI

Another question connected to the m-Learning Initiative is the "Pedagogical Return on Investment". This inquiry is about whether the costs, in terms of time and money, involved in the initiative are perceived as worth it on the part of each of the key stakeholders, who include

students, faculty, staff, and future employers. This aspect of the research will be conducted through a series of interviews, focus groups, and surveys but are still in the development stages. As these measures are developed they will be used to address hypotheses 5 and 6.

7. Case Studies

The project implementation team plans to collect highly detailed accounts of specific incidents of "Epic Successes" and "Epic Failures". These written summaries will be gathered and presented as examples of transformative teaching and learning in the spirit of informing our ongoing development of the m-Learning Initiative for our own internal growth and development as well as opportunities to share this journey with other institutions. We have developed a form for reporting Case Studies with the hope that the documentation will include screen shots, movies, and other artifacts of the activities. The Case Study summaries will be used to address hypotheses 5 and 6.

8. Assessment after Graduation

As part of the TAACCCT IV Grant there are required follow up surveys to all of our students after graduation, or departure from the program. Within these surveys we would like to embed a couple of follow up questions regarding the m-Learning Initiative. These questions could explore if the students perceive that learning how to use a mobile device helped to better prepare them for the technology they encounter in the workforce. These questions are currently under development and would address hypothesis 8.

9) ***Does the m-Learning Initiative meet the requirements of meeting the concept of student-centered learning as defined by Texas A&M's Center for Teaching Excellence?***

The KVCC m-Learning Initiative Implementation team cannot reference if this initiative is in line with the Texas A&M's Center for Teaching Excellence student-centered learning definition at this time. The KVCC Mental Health faculty have not participated in any trainings or informational forums regarding the Texas A&M's Center for Teaching Excellence during Academic Year 2015 – 2016. Without training or background on their framework we do not feel it is currently within our scope to speak to compliance with this framework's requirements. We have reviewed their website but did not find any specific information regarding an outline of the criteria for the concept of student-centered learning as defined by Texas A&M's Center for Teaching Excellence.

Our review of the literature informed us that a student-centered learning environment encourages students at any age to become independent learners and ultimately to be in charge of their own education. Some within the field of education believe there is a shift from an educator's role being a traditional "imparter of knowledge" to that of coach and consultant. Do-it-yourself projects, student-to-student teaching, project-based learning, and student-centered learning environments are examples of how the environment and structure of learning and teaching is changing. As technology is integrated into the presentation of information and the subject matter this can allow unprecedented levels and types of exciting collaboration and learner to learner connectivity (Bogdan, 2011).

Our understanding of student centered learning includes looking at all the components of our curriculum, including technology to make sure that all components, in some way, improve or facilitate student learning. The idea being that all components of the curriculum should be designed to enhance student learning (Great School Partnerships, 2014). The TAACCCT IV

Grant has allowed the hiring if a Program Manager/Instructor in the program as well as funding for an individual to review the current program curriculum. Taking the feedback from these individuals will help to make sure the current Mental Health Program curriculum has a student centered focus.

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10) You have previously made a connection between the applicability of m-Learning and specifically iPads to enhancing employability because of the familiarity concept of using mobile technology in the workplace. Above and beyond the above enhancement of learning what methods or applications specifically address adaptability to the workplace. For instance Nursing and Medical Assisting employ the Neerperfect software which is used in their specific work environments and a PMS based software.

When an individual works in the field of mental health documentation and researching community resources are two key components of the work. The iPad is being used to mirror what it is like to document client interactions electronically, write treatment plans on paper and electronically, as well as writing summaries and client notes. The field of mental health has moved to the electronic medical record as part of the efforts at the federal level to have all health care organizations move to an electronic medical record (EMR). More than half of doctors' offices and 80% of hospitals that provide Medicare or Medicaid will have electronic health records by the end of 2013, the Department of Health and Human Services announced Wednesday. "We have reached a tipping point in adoption of electronic health records," said HHS Secretary Kathleen Sebelius, and they "are critical to modernizing our health care system" (Kennedy, 2013). Many mental health service providers are connected to various hospitals, doctor's offices and clinics. As a result they have continued to add more and more sophisticated software applications to keep track of interactions with their consumers.

There are specific apps that can be used to mirror an electronic medical record to provide the students with realistic simulations of the work. We are also integrating electronic signing of

documents and electronic submission of documents to mirror these other skills as well. We understand these tasks can be done on a traditional computer or laptop but when we explore ease of use, the reality is that having a tablet in hand when meeting with clients greatly increases the ease of use. A staff member can use their tablet to research resources, have the client electronically sign documents on the screen and complete various applications for social services. Some of these tasks would be more challenging on a laptop in a consumers home and near impossible on a desktop.

In Maine a lot of the mental health documentation occurs within the APS Health Care System (http://www.qualitycareforme.com/). Currently the APS system is built in a traditional Windows format. There has been some speculation that they are also developing their software to work in a mobile platform, such as with the iOS system within iPads. This is something we are continuing to explore and if they do add the iOS documentation then we will be able to add even more realistic practice to our student's assignments and projects.

11) Do we have any evidence that the replacement texts are equal to or better than the print textbooks that were previously in use?

The motivation to revise our course materials, including textbooks and other resources, was motivated by a number of goals:

1. Ensure that the material in the courses, including textbooks, accurately reflects the state of the field and best practice in Psychiatric Rehabilitation.
2. Explore the efficacy and cost savings to students through the use of alternatives to traditional textbooks (primary source articles, web resources, original content, videos) and eBook versions of traditional books.
3. Explore the ability to integrate course materials more directly into the prescribed course lessons.

The textbooks and resources were vetted by content experts in each discipline of mental health. Our faculty frequently access a larger number of peer reviewed articles as replacements for information in textbooks. The peer reviewed articles are primary source materials whereas textbooks are secondary sources.

Research supports that eBooks (and the use of mobile devices) have a positive impact on learning. The study reported that students who had their own mobile devices were more likely to access course-specific and library acquired eBook source materials. The authors reported a high level of engagement in the project and that students were "excited to hear about the eBook format and have access to information at point of need" (Glackin, Rodenhiser, & Herzog, 2014, p. 17). The phase "point of need" refers to the availability of course resources when they are needed. By having all of our resources available on the iPad, our students are able to access their course materials at any time and at any place. Considering the demographics of our student population (working, children, etc.) being able to easily take along all of their materials in one device is a clear advantage. With the exception of a few library-database connected optional resources, all the course materials can be downloaded directly to the iPad. The articles and supplemental readings can be saved within the iBook app for reference at any point, even if the student only has intermittent access to Wi-Fi. This means that students can access their materials when they are not connected to the Internet. Electronic texts and resources are searchable, able to be highlighted, can be read allowed for students who need learning accommodations or wish to listen to a reading while doing something else (exercise, housework), and portable (email correspondence with Ian Camera, Apple, 2016).

In Appendix D you will find a chart of the cost savings that have already occurred as well as the projected cost savings for additional text book changes as of Fall 2016. During the 2016-

2017 Academic year we will be exploring and developing our own eBooks utilizing iBooks Author. This free eBook creation software will enable us to convert what is now HTML files for each Lesson into collections in multi-touch books with integrated media and interactions. iBooks Author is a very powerful creation tool with lots of very cool features that we have yet to explore.

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12) *Are accommodations being made to make the m-Learning initiative ADA compliant – are large text and speech enhanced technologies available to those wanting to access the program?*

Prior to the initiation of the m-Learning Program, the KVCC Department of Social Sciences was taking steps toward ensuring Universal Design in all online course materials. The fact that ALL of the materials for the Mental Health courses are online, we are approaching full compliance to Universal Design standards as set forth by the w3 Consortium. At the current time, all the course content is formatted in HTML which is fully accessible through readers and text-to-speech devices. Blackboard itself is also designed in accordance to Web Content Accessibility (WCAG) Guidelines 2.0 Level AA as well as the Section 508 standards in the United States.

Apple has a long history of creating accessible devices and the iPad is no exception. In fact, due to the mobile nature of the iPad it has become a favorite device among many groups that use adaptive equipment. As part of the celebration for the anniversary of the Americans with Disabilities Act, Apple highlighted their own accessibility apps in the Apple App Store. Their organization feels strongly that they have created tools that improve lives. There are many accessibility features built into iPhones, iPads, and iPod Touches. The accessibility apps help individuals with everything from routine tasks to communication and language skills. Apple

maintains a specific website related to the tools it has created (and those created by 3rd parties) for accessibility: http://www.apple.com/support/accessibility/

For example, for those individuals who are blind or have low vision, here is a list of the tools built into the iPad:

- VoiceOver (names items as you touch them on the screen)
- Zoom
- Invert Colors
- Grayscale
- Speak Selection, Speak Screen, Speak Auto-text
- Larger Text
- Bold Text
- Button Shapes
- Increase Contrast
- Reduce Motion
- On/Off Labels

These accessibility features are built into the operating system on every device, thus when app developers develop applications they must all comply with the use of these features as each developer is using the same set of APIs built into the coding for iOS apps. This is one of the advantages of Apple's closed system. It reviews applications not only for marketing purposes but the specifics within the software develop kit and the review system assure that all applications developed for iPad meet these guidelines.

According to Ian Camera of Apple (email correspondence 2016) the iOS has received awards recognizing its power in the area of accessibility. There are currently people editing videos professionally using nothing but a head switch. There are people who are blind who have become photographers using Apple devices. IOS devices are frequently used in the disciplines of Speech and Communications because of the power they bring to people who need accommodations in one area or another (vision, hearing, motor control, etc.).

Here are some specific examples of research related to the use of iOS devices (mostly iPads)

in the area of adaptive education and accessibility. Spooner, Kemp-Inman, Ahlgrim-Delzell, Wood, & Davis (2015) found that portable technology such as an iPad2® can be used to enhance literacy skills for students with severe disabilities in elementary school. A typical way to teach literacy to this population is through the use of a shared story. Although systematic instruction has proven to be an effective teaching strategy, the generality of the literacy skills usually has not been the focus of the training. In this study, five students with severe disabilities (IQ below 55, range in age 7-11 years, grade range 2nd-6th grades) were taught to generalize literacy skills via multiple exemplar training. In research by Hennig (2016), it was found that the widespread adoption of mobile computing is a good thing for librarians who care about access for all. Mobile devices make use of natural user interfaces, and those interfaces are making computing easier for people of all ages and abilities. Mobile learning is headed in a direction that is empowering for learners of all abilities. Hester, 2015, presented a case study that showcases how a blind man uses his iPad. These are just a few examples from the literature regarding how the iPad provides many opportunities for use for individuals with disabilities.

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13) Are accommodations being made to make the m-Learning initiative UDL compliant – are alternative means of access and responding to assignments available to the students who need them?

UDL, or Universal Design for Learning, is a model of instructional design and delivery that challenges authors to design and deliver materials that provide various degrees of options for students in terms of how material is taught and how learning outcomes are assessed. The graphic below captures the three areas of application of UDL principles.

I. Provide Multiple Means of Representation	II. Provide Multiple Means of Action and Expression	III. Provide Multiple Means of Engagement
Perception	Physical action	Recruiting interest
Language, expressions, and symbols	Expression and communication	Sustaining effort and persistence
Comprehension	Executive function	Self-regulation

Provide Multiple Means of Representation

Course materials within the Mental Health program are designed to incorporate a variety of media (images, movies, links, charts, etc.) directly into the context of the Lesson Plan through the development of standardized Lessons in HTML format. Depending on the specific content of a Lesson, materials that are provided for students meet the various expectations of this standard by providing graphic and word-based descriptions of data, link to external data sources and information, and the extensive use of images and movies to explore content areas. In addition, and specific to the m-Learning initiative, we have incorporated a number of apps for content alone. These represent alternative formats in which to interact with knowledge sources.

Here are examples from just three individual courses regarding the use of apps and eBooks to provide multiple means of representation of course material.

- MHT 101: Mental Health Seminar
  - eBooks related to being a new college student
    - Getting Ready for College
    - Study Skills
    - Staying Healthy
    - Roommates and Dorm Life
  - Publication Manual of the American Psychological Association
  - Indeed Job Search – a customizable app for accessing regional databases on job availability.

- MHT 110: Interviewing and Counseling
    - eBooks related to the subject matter
        - Managing Madness in the Community
        - Mental Health Services: A Public Health Perspective
        - Homelessness, Housing, and Mental Illness
    - Mental Health and You – an app to explore personal habits and their impact on mental health.
    - Patient Protection and Affordable Care Act – this app explores laws related to confidentiality.
    - Addiction Talk Radio – online radio source for information on Addiction and Treatment
    - Domestic Violence Inventory – Resources and information on DM

- MHT 112: Crisis Identification and Intervention
    - eBooks related to subject matter
        - Crisis Intervention: A Handbook of Immediate Person-to-Person Help
        - Crisis Intervention: Contemporary Issues for On-Site Interveners.
        - The Complete Guide to Crisis Counseling
    - TED – an app that accesses the very popular TED Talks series
    - Child Abuse Information – an app with specific information on resources related to child abuse.
    - ASPIRE News – an online newsletter related to Domestic Violence.
    - Suicide Safer Home – an app with hints and tips on Suicide Prevention.
    - Know Bullying – an app with information and strategies for dealing with bullying.

Provide Multiple Means of Action and Expression

This particular standard within UDL challenges course creators to develop and encourage students to explore different ways of expressing their knowledge, skills, and other acquired learning. Traditional learning emphasizes the use of tests and written papers to engage students

in self-expression and assessment. Through the use of apps available on the iPad we have been

able to expand the ways in which students express themselves and what they know. Here are

examples from just three individual courses regarding the use of apps to provide multiple means

of action and expression.

- MHT 216: Mental Health and Aging
    - Ancestry – this app allows students to explore and document their own family histories.

- MHT 110: Interviewing and Counseling
    - Notability – This app allows students to take notes in various ways. Students can write with a stylus, type, dictate, record, and film/take pictures of lectures.
    - Statistics Visualizer – this particular app allows students to present numerical data in a number of ways. The app can be used as a stand-alone product or data sets can be exported for use in presentations.
    - Optimism – this app allows students to explore the ways in which their own emotions impact their own personal mental health. This journaling software allows students to monitor emotional states and situational triggers.

- MHT 112: Crisis Identification and Intervention
    - Day One – This is a journaling app that allows students to keep a journal and include text, audio, images, movies, etc. They can also post these journal entries to the web or produce PDFs.

Provide Multiple Means of Engagement

Within education, engagement can happen both with other people and with the material

itself. Many of the apps we have chosen not only provide for an alternative means of

presentation and expression, but also represent options for engaging the students with the

material. It should also be noted that the online versions of these classes have very high

expectations for interaction in the graded online discussion boards. Each student is required to

post a main reply to the prompt and at least two additional responses to other students' posts. It

is not uncommon that long threads of conversations happen where there is a deep exploration of

the content matter.

The iPad provides the means by which students can engage in the following ways:

- Working in groups students can create in-class presentations and display them from their desk onto the overhead screen.
- Students can explore web resources for collaborative problem solving when working on specific example cases.
- Students can communicate with each other outside of class using email, messaging, group communication apps (such as Slack), and through video conferencing options such as WebEx.

Here are examples from just four individual courses regarding the use of apps to provide

multiple means of engagement.

- MHT 110: Interviewing and Counseling
    - o Facebook and Messenger – these commonly used apps and services are used to create connection among the students in the class.
    - o Slack – this tool allows groups of students to share a common digital space for collaboration.
    - o WebEx – This is an app that allows students to engage in video conferences with each other. Added benefits of this particular app is that it records the video and it is free.

- MHT 124: Psychosocial Rehabilitation
    - o Jungian Type Questionnaire – this app allows individuals to take a personality test and share it with others in the class.

- MHT 214: Incest, Sexual Abuse and Trauma
    - o iMovie and YouTube – the combination of these apps allow students to express themselves in video format and interact with a wider audience, not just with classmates.

- MHT 218: Substance Abuse
    - o GenoNote – this app allows students to collaborate on the creation of genograms.
    - o Slack – this tool allows groups of students to share a common digital space for collaboration.

*14) **Access to LMS and integration of disparate learning platforms – problems with this have been noted in the past – have these been solved or is a program in place to address this issues?***

KVCC utilizes Blackboard (Bb) as its primary Learning Management System (LMS). While Bb is probably the most widely used LMS it is not a "modern" LMS due to its supreme lack of support for mobile devices. Regardless of the type of mobile device, the apps developed by Bb to access courses are still not fully functional. Examples of this lack of attention to the needs of mobile learners are the fact that the Bb app itself (for both iOS and Android) does not allow access to Messages (the internal email client in each course). The Collaborate app (video conferencing) does not support video (only audio) from mobile devices. According to a variety of reviews, the app does not have the ability, as do many apps today, to interact with other apps that are on the device nor to engage in file transfers.

If KVCC is going to make any headway in the mobile learning world, it will likely need to find an alternative LMS with integrated mobile device support. Ian Camera, of Apple, shared via personal email (2016) that more and more of these platforms are using native apps, which means that switching platforms is as easy as tapping on a different icon. The student's credentials are saved in the app, and now the larger iPads can display two of those at once.

During this first phase of the m-Learning Initiative we continued to publish our HTML based course materials, quizzes, assignments, grade books, etc. on our standard LMS Blackboard. What follows are the various struggles and work-arounds that we have encountered.

- When accessed on the iPad, Bb pages often change format and entering text makes the screen jump to different parts of the page.
  - We found that this was due to an incompatibility between Apple's WebKit technology in its flagship browser, Safari, for iPad and Blackboard.
  - We explored the use of an alternative browser for iPad, Puffin, which does not have this limitation and allows for navigation and data entry into Bb that is equal

to a regular computer.

- Since the file management system on the iPad stores files within apps (as opposed to a documents folder), students were not able to submit written documents to Bb assignment drop boxes.
    - o Students need to sign up for a free cloud storage service such as Drop Box.
    - o Students complete their work and save it into their Drop Box account. They can then access the Assignment Drop Box in Bb. When they choose to select a file to submit they are provided the option to access their cloud based services.
    - o We have also emphasized the use of other types of assignment submission such as video. Rather than have these submitted to Bb we are having students create their own YouTube or Vimeo channels and they are providing links to these submissions instead of the actual file.
- Messages is a commonly used email client that is a part of every course in Bb. Access to messages is limited to opening, reading, and replying to emails on the iPad. One cannot create a new email in messages on the iPad.
    - o We have not been able to find a specific work-around for this particular problem other than encouraging students to use other emails such as their KVCC email.
    - o Most of the time students are simply replying to emails from their instructors within classes so this limitation has not been experienced by many students.
    - o Alternative engagement apps such as Facebook, Mail (regular email client), and Slack have lessened the impact of this limitation.

All the other features of Blackboard seem to function well on the iPad, particularly in the Puffin browser. Features that appear to operate include:

- Participating in online graded discussion
- Taking quizzes and tests
- Accessing feedback from instructors
- Accessing the grade book
- Accessing course materials posted in Bb.

Through the 2016-2017 Academic year the program will be experimenting with the use of two alternative LMSs.

1. iTunes U – while this LMS is very limited in functionality it has a deep connection to eBooks and the Apple App Store
2. Schoology – this is a commercially available LMS that was built specifically for mobile devices.

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15) Has been training for Adjunct Faculty been institutes that ensures a consistent strategy so that all classes are coequal in the application of the initiative?

The Mental Health Program curriculum has prebuilt lesson for all 11 of the classes. This way whether a class is offered online or face to face, the student experiences the same general content. This helps us keep our program materials aligned with the Maine Mental Health Rehabilitation Technician/Community curriculum, the KVCC ELO's and the General Educational Outcomes. When an adjunct teaches the class they have access to same course materials and lesson plans as the full time staff members. When iPad applications were integrated into these courses all of the current faculty, adjuncts and full time, came together for an introductory meeting.

At this meeting the expectations of adding 2 applications (apps) for each face to face class and 5 apps for the online classes was introduced. This meeting occurred in September 2015. The faculty were then tasks with reviewing and trying apps to select the ones they liked best to integrate into their courses. The faculty who did not have access to iPads were also provided an iPad for their use during the exploration process. They were provided some initial training, a $25 iTunes gift card to purchase and try apps and encouraged to consult with the full time faculty members or the Library Director if they had questions about the iPad or specific apps.

At the end of the Fall 2015 semester all the faculty members were asked to submit the apps they had selected and which lessons they wanted to match their apps with. We had a wonderful

response from the adjuncts during this process. Many of them had selected way more than 5 apps, they had researched dozens and then worked with the full time faculty members to integrate them into the courses. Each course then had an m-Learning summary sheet that listed all the apps that were integrated into this course. This allowed the students and faculty members one place to go to see the selected apps for each course they were involved with. Also, within each lesson plan, when an app was integrated into the lesson we created a specific iPad integration box. This box had the same title and graphic imagery so that when a student or staff member encountered this box and graphic they knew it meant that lesson had an app connected with it. The box listed the name of the app, what the student was tasked with doing with the app as well as a picture of the app. This allowed the student to know if they were selecting the correct app from the App Store.

A number of adjunct faculty members met one on one with the full time faculty members to review the apps selected, make sure they were all tested and worked together to agree on which lessons the apps should be integrated into. The next step now, at the end of the semester, is for us to follow up with all of the faculty to assess their thoughts and impressions about how this first semester of the m-Learning Initiative went. Our instructors can always add and enhance their lessons and course materials anyway he or she decides for face to face classes so we are also aware that our faculty members tried a number of different applications and projects this semester since the students did have iPads in hand. We look forward to learning more about their impressions.

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Appendix A

Learning and Engagement Survey

<h1 style="text-align:center">m-Learning Initiative
Learning and Engagement Survey</h1>

Listed below are the areas that will be surveyed as part of this data collection process.

1) Demographics

∖ Age
∖ Gender
∖ College Experience (number of credits completed)
∖ Are you a matriculated Mental Health program student?
∖ How many credits are you taking this semester?
∖ Are you taking classes online, face-to-face, or both?

Rating Scale - Respondents to this survey will rate questions 2, 3, 4 and 5 on a 5-point Likert scale based on the following definitions:

> 1 – This statement is not true at all.
> 2 – This statement was seldom true.
> 3 – This statement was true about half of the time.
> 4 – This statement was true most of the time.
> 5 – This statement was true nearly all of the time.

2) Perceived Usefulness

∖ Using the iPad/Apps in class enabled me to accomplish tasks more quickly.
∖ Using the iPad/Apps improved my performance as a student.
∖ Using the iPad/Apps increased my productivity.
∖ Using the iPad/Apps increased my effectiveness.
∖ Using the iPad/Apps made it easier to do my work.
∖ I would find using an iPad/Apps useful in my job.

3) Perceived Ease of Use

∖ Learning to operate the iPad/Apps was easy for me.
∖ I find it easy to get the iPad/Apps to do what I want them to do.
∖ My interactions with the iPad/Apps are clear and understandable.
∖ I find the iPad/Apps to be flexible to interact with.
∖ I find it easy to become skillful at using the iPad/Apps.
∖ I find the iPad/Apps easy to use

4) Perceptions of Learning

∖ The iPad/Apps helped me apply course content to solve problems.
∖ The iPad/Apps helped me learn the course content.
∖ The iPad/Apps helped me connect ideas in new ways.

ᚼ The iPad/Apps helped me participate in the course activities in ways that enhanced my learning.

ᚼ The iPad/Apps helped me develop confidence in the subject area.

ᚼ The iPad/Apps helped me develop skills that apply to my academic career and/or professional life.

5) Perceptions of Engagement

ᚼ iPad/App activities motivated me to learn the course material more than class activities that did not use the iPad.

ᚼ I participated more in class during iPad activities than during activities that did not use the iPad.

ᚼ My attention to the task(s) was greater using the iPad.

ᚼ It was easier to work in a group using the iPad than in other group activities.

Appendix B

**Learning Initiative – KVCC Mental Health Program
iPad Incident Report**

m-Learning Initiative – KVCC Mental Health Program
iPad Incident Report

The purpose of this form is to document the institutional impact of the 1:1 iPad initiative within the Mental Health Program. Please complete these forms each time you encounter a student or staff/Faculty within the Mental Health Program who asks for help connected with the m-Learning initiative.

Date: _____ KVCC Staff Name:_____

Your KVCC Role (Faculty, Library Staff, Student, Tutor, etc.): _____

Location of Incident (Classroom, IT, Learning Commons, etc.): _____

Time spent addressing issue (minutes): _____

Type of Incident

       In-class Activity Evaluation
       Technical Question – iPad
       Technical Question – App
       Technical Question – Blackboard Integration
       Teaching Session
       Orientation Questions – iPad Requirements, Financial Aid, Access, etc.
       Other

       _____

Briefly describe the incident (include the person's name if possible and with permission):
_____
_____
_____
_____

Briefly describe how you handled the situation:
_____
_____
_____
_____
_____

Please attach any documentation you feel helps identify the incident. Please keep in a folder and send all completed m-Learning Incident Report forms to Mark Kavanaugh at the end of the Spring 2016 semester.

Appendix C

Mental Health Program Special Assignments

Below you will find a list of the standard KVCC Mental Health Program "Special Assignments" for each class. Assignments labeled with an asterisk (*) are the ones that have been modified specifically for the m-Learning Initiative.

- MHT 104: Community Mental Health

  - Civic Engagement - Service-Learning*

- MHT 110: Interviewing and Counseling

  - Ethical Reasoning - To Friend or Not to Friend

  - Inquiry and Analysis - Counseling Topics Presentation*

  - Interpersonal Communication - Casual Interview*

- MHT 112: Crisis Identification and Intervention

  - Teamwork - Acting on Crisis*

  - Written Communication- Reflective Journal*

- MHT 124: Psychosocial Rehabilitation

  - Written Communication - Feature Article on Jobs in Mental Health*

  - Lifelong Learning - Program Review

  - Information Literacy - Topic of Interest

- MHT 125: The Changing Workplace

  - Intercultural Knowledge - Culture of Homelessness*

- MHT 214: Incest, Sexual Abuse, and Trauma

  - Quantitative Literacy - Public Service Announcement Paper

  - Creative Thinking - Public Service Announcement Presentation*

- MHT 216: Mental Health and Aging

  - Reading - Analysis of a Poem

- MHT 218: Substance Abuse

  - Critical Thinking - AA and Controlled Drinking

- MHT 220: Case Management

  - o Problem Solving - Community Outreach Project*

  - o Oral Communication - Article Presentation*

- MHT 226: Vocational Aspects of Disability

  - o Lifelong Learning Project

Appendix D

Textbook Cost Savings Chart (Created March 2016)

Course	Prev. New	Prev. Used	Spring 16	Fall 16
MHT 101	$0	$0	$0	$0
MHT 104	$94.10	$56.90	$0	$0
MHT 110	$162.90	$98.15	$0	$0
MHT 112	$145.20	$87.55	$140.29	$0
MHT 124	$0	$0	$0	$0
MHT 125	$211.30	$127.20	$0	$0
MHT 214	$14.45	$9.10	$11.99	$11.99
MHT 216	$13.85 + $47.90	$8.75 + $29.15	$9.99	$9.99
MHT 218	$47.30	$28.80	$15.65	$15.65
MHT 220	$0	$0	$0	$0
MHT 226	$118.45	$71.50	$0	$0
PSY 101	$243.00	$146.20	$243.00	~$9.99
SOC 101	$71.10	$43.10	$71.10	~$9.99
TOTALS	**$1169.55**	**$706.40**	**$492.02**	**$57.61**