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Computer Applications in Counselor Education: Developing Cultural Competencies Through Online Collaboration of Future School Counselors

L'informatique dans l'éducation des orienteurs : le développement du savoir-faire culturel par la collaboration en ligne de futurs conseillers en orientation pédagogique

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Abstract

This study examined the applications of computer-mediated student collaboration in a graduate multicultural counseling course. The course work included a reflective cultural competency building assignment that utilized online communication and collaboration using a wiki to extend and improve students' multicultural counseling and social justice advocacy skills. The online assignment design was aligned with the current call for utilizing technology in the counseling profession. It further considered the needs of the future counselors, the current levels of exposure to and experience with available technology of the class members, and the opportunities for utilization of a variety of online-based tools to extend in-class and out-of-class discussions. Students' response to this new form of class work and communication confirmed the potential of the online component to other aspects of counselor preparation, and the data analysis showed that the computer-mediated assignment was a valuable addition to developing students' skills as multiculturally competent professionals.

Résumé

Cette étude a examiné les applications de la collaboration entre étudiants par l'entremise de l'informatique dans le cadre d'un cours d'études supérieures sur l'orientation en contexte multiculturel. Les travaux du cours comprenaient un travail de réflexion pour renforcer le savoir-faire culturel grâce à la communication et à la collaboration en ligne, en utilisant un wiki pour accroître et améliorer les aptitudes des étudiants en orientation en contexte multiculturel et en défense de la justice sociale. La conception du travail en ligne s'alignait sur la tendance actuelle pour une utilisation accrue de la technologie dans le métier de conseiller en orientation. On y tenait également compte des besoins des futurs conseillers, de leur degré d'exposition à la technologie et de leur expérience avec celle-ci, ainsi que des occasions pour l'utilisation d'une

variété d'outils en ligne pour accroître la portée des discussions en classe et hors de la classe. La réaction des étudiants à cette nouvelle forme de travaux scolaires et de communication a confirmé le potentiel de la composante en ligne pour les autres aspects de la formation des conseillers. L'analyse des données a démontré que le travail réalisé par l'entremise de l'informatique a constitué un ajout précieux pour développer les aptitudes des étudiants comme professionnels compétents en contexte multiculturel.

Introduction

The number of culturally, ethnically, and linguistically diverse students across schools in North America is continuously growing (Cavazos-Regh & DeLucia-Waack, 2009; Ponterotto, Mendelowitz, & Collabolletta, 2008). Census data shows that in the United States, ethnic and racial minorities account for 80% of the population growth nationwide, and this change inevitably influences strongly the makeup of the increasing diversity across schools. Further, by year 2010, there was expected to be a 50% increase in minority population growth compared to the Census held in 1990 (Smith, Young, Bae, Choy, & Alsalam, 1997, as cited in Portman, 2009), while the population of White students was expected to be gradually decreasing (projected at 10%). Similarly, residents of Canada represent 200 ethnic groups, and one out of every five Canadians was born in another country. In the last decades, the growth of foreign-born Canadian population also surpassed significantly the growth of Canadian born individuals – as illustrated by a 13.3% foreign-born growth versus 3.3% native-born in the 2001-2005 period (Ontario Ministry of Children and Youth Services, 2008).

As part of the greatly needed educational support system, the counseling profession had defined a spectrum of activities that would respond adequately to these changes (Portman, 2009). Multicultural counseling has increasingly become an intrinsically important part of the counseling profession. In fact, it is now considered the fourth force in the counseling profession (Pedersen, 1991), together with the forces of psychodynamic, humanistic/existential, and behavioral counseling theories and methods. Recently, the field further recognized a strong need to infuse social justice and client advocacy as important factors of multicultural counseling competencies. As a result, the training of culturally competent counselors - defined by Pedersen (2008) as counselors' ability to address their clients' cultural context - is now emphasized in counselor education programs, and the infusion of social justice and advocacy competencies has further gained momentum. Pedersen describes culturally competent counselors as those "achieving an accurate awareness of their culturally learned assumptions as those assumptions might be both similar and different to the assumptions of culturally different clients. … comprehend[ing] the meaningful facts and information describing each client's cultural context. … [being] able to act appropriately to help the client achieve positive outcomes" (p. 6). In the context of serving school-aged population, a working definition of culturally competent counseling is "providing services to people from diverse social and cultural groups in ways that are respectful of those groups, as well as being accommodating to their diverse characteristics and needs" (Ontario Ministry of Children and Youth Services, 2008, p. 9).

Dahir and Stone (2009) outline the future charge of the school counseling profession as one that includes, together with consultation, coordination, and leadership, a strong commitment to and

intentional applications of social justice advocacy and cultural mediation achieved through ongoing collaborations and support of technology. Thus, technology has been identified as an important component within the counseling profession. The responsibilities of counselor education programs with respect to these parameters are growing, as courses related to multiculturalism and diversity seek to provide the competencies required from counselors in an increasingly culturally heterogeneous, technology-driven society. As a result, these programs need to seek ways of blending these sets of skill and knowledge in appropriate and applicable ways.

Multicultural Counseling, Training, and the Role of Technology

Multicultural counseling consists of practice between or among individuals from different backgrounds based on race, ethnicity, ability, sexual orientation, religion, national origin and culture (Arredondo et al., 1996). Multicultural counseling competencies are conceptualized across four factors (Sue, Bernier, Durran, Feinberg, & Pedersen, 1982). The first, *Attitudes/Beliefs*, explains the ability to examine personal biases and stereotypes and an awareness of how counselors' preconceptions may negatively affect counseling relationship. The second factor, *Knowledge*, refers to counselors' understanding of their own worldview, and the specific knowledge of the cultural groups they serve. The third factor, *Skills*, focuses on strategies helpful in working with specific groups. A fourth factor, *Relationship*, later added by Sodowsky, Taffe, Gutkin, and Wise (1994), describes the counseling process and relationship dynamics with culturally diverse clients. Within these factors, the most important aspect of becoming culturally responsive and competent counselor is being more aware of one's own culture and attitudes and beliefs about other cultures and being more aware of one's own culture and social status (Erguner-Tekinalp & Harper, in press). The development of multicultural counseling competencies could be achieved through heightened self-awareness (Parker, 1988). Lack of awareness of cultural issues, biases, stereotypes, as well as sociopolitical realities may deter counselors' ability to serve effectively to culturally diverse clients (Holcomb-McCoy & Myers, 1999). Developing awareness of one's biases and negative attitudes may lead to embarrassment and confusion (Parker & Schwartz, 2002) and resistance (Sue & Sue, 2008). The presence of these issues in the teaching of multicultural counseling courses can present a challenge for the instructor as well as the students, as a wide scope of multicultural issues has to be covered in a rather limited time. Quite often, the course topics and content are politically charged and emotionally provoking (Sue & Sue, 2008). During the process of becoming multiculturally competent, students develop a variety of emotional reactions (Parker & Schwartz, 2002). Therefore, in addition to extensive instruction, practice and reflections are important to help the students reflect on their strong emotional reactions. Thus, the nature of a multicultural counseling course lends itself nicely to a combination of extensive time for class discussions in conjunction with implementations of experiential activities and role-plays supported by in-depth individual reflection. However, due to the sensitive nature of issues covered in multicultural counseling courses and the need to often challenge existing beliefs and worldviews, some students may be hesitant to participate in-class discussions and voice their opinions. In addition the limited class time is not enough to cover the content, have experiential activities and insightful discussions.

In response to these challenges to building a cohesive, participation-rich, and increasingly reflective course, a number of technology-based instructional tools offer opportunities for support and enhancement of the learning process. Parallel with the acknowledged commitment to incorporating technology as a tool of the counseling profession in the 21st century, these tools also allow educators to extend ongoing discussions and experience-based exercises beyond the immediate classroom opportunities. Advances in computer technology have brought changes to the training of counselors (D'Andrea, 1995). The use of technology in supervision and counseling has also been discussed (Van Horn & Myrick, 2001). Technological tools have been used in many aspects of counselor education such as career counseling (McCarthy, Moller, & Beard, 2003), marriage and family therapy (Stevens, Dobrovolny, Kean, & Shulman, 2003), human development (Lundberg, 2000), and supervision for practicum and internship (Van Horn & Myrick, 2001). Some examples include the use of Internet as a tool for career counseling, and the utilization of a range of tools (newsletters, video conferencing, and websites) in school counseling. Although the use of technology in counselor education has also been discussed, the information on how technological tools can be used to advance the training of culturally competent counselors is scarce. The literature lacks sufficient information and guidelines on how to infuse technology in training programs (McCarthy, Moller, & Beard, 2003), and although publications on utilization of technology in counseling and counselor education are growing, not enough attention is given to the use of technology in ways that can enhance the multicultural and social justice advocacy in counseling training.

Description of Use of Technology in the Course

The purpose of this study was to explore the opportunities for including educational technology into a graduate multicultural counseling course. The goal of the project was to support the development of student awareness and reflection and to enhance their multicultural and social justice advocacy counseling competencies through technology utilization. The use of technology aimed to help creating a safer environment and provide more time to reflect. The use of computer-based tools with read-write capabilities (or web 2.0 tools) was sought to achieve better student engagement and participation. The project was further focused on promotion and exploitation of online communication and collaboration among participants in a counseling training program. The targeted product- and process-oriented intersection between four competencies (counseling expertise, multicultural practices, and technology literacy) was envisioned through interaction, assignment completion, and skill practice.

The decision on the specific tool for this project was guided by four sets of factors. First, it needed to be suitable for the multicultural social justice and advocacy tasks planned for the course, which required the use of text, pictures, online searches, collaborative work, and extensive communication through comments and opinion sharing. Second, the tool needed to be platform-independent and easily available to users of both PC and Apple computers. Only an Internet connection was to be required. Third, due to the potentially sensitive and personal nature of the projects and the information they were to include, there was a need for a password protection and access provided to course members only. Fourth, due to the wide range of students' technology literacy competencies present in the classroom, the tool needed to have rather intuitive level of use (comparable to the use of email), and ability for revisions and edits. The goal was for this technology utilization to help the development of awareness and

knowledge in multicultural counseling without taking away from the valuable time by having to learn how to use these tools.

The web 2.0 tool that surfaced as most closely satisfying these criteria and the nature of the course assignment was the wiki. This choice was further evaluated in terms of capabilities to accommodate all of the requirements of the specific assignment, to allow for extensive online communication between students if and when needed, and to provide options for instructor's input and feedback throughout the semester. The project planning and tool choice also accounted for the need of the course instructor to gain sufficient competencies about the tool and experiment with its use in ways similar to the envisioned course work. An additional consideration in the process of narrowing down the choice of tool was the anticipated need for providing ongoing support to students with troubleshooting and tool use if and when they needed it. Based on these criteria, a wiki was selected as the project tool.

A wiki is an interactive web site consisting of multiple document-based pages that can be edited by its authors or authorized users (Hendron, 2008). It could have a *History* tool that allows all site editors and writers to account for changes. A number of wiki site subscriptions are available to web users online. For this assignment, the wiki was created in PBworks.com platform because of its features that accommodated the requirements and the goal of the project: (1) password protected access for invited users; (2) editor similar to a number of word-processors, which are already familiar to students; (3) ability for attaching word documents and other files, including pictures; (4) easy to navigate web site template; and (5) availability of a “comment” feature on every page.

Developing Empathy: Packing And Moving

The purpose of the course assignment was to help future counselors develop an empathic understanding of the processes that accompany permanent migration to another country. Students pretended that they were preparing to move to a foreign country not knowing when or if they would ever go back to their homeland. They needed to pack a suitcase that followed certain guidelines determined by mode of transportation, weight and size limits, and a number of practical rules. A complete description of the assignment is included in Appendix A.

After students packed their luggage, they were asked to take a picture of it. Then, they wrote a brief reflection papers answering the questions listed in Appendix A. Students were further asked to post their luggage pictures along with the reflections on the wiki page. The final step required students to check other students’ pictures and reflections, followed by commenting and providing feedback to them.

Technology Environment

The course wiki template was further developed to accommodate submissions and discussions about this assignment. It included a summative front page, with directions and links to the rest of the wiki content. In a separate folder for the assignment, individual student pages were created. Every student was able to post on their page the assignment submission and any supporting pieces, including pictures, descriptions, and explanations. The *Comments* feature was extensively used for peer and instructor input. Students were to visit their peers’ pages and leave comments as well as reflect on their own luggage decisions. The wiki was password-protected, with access

available only through invitation provided by the instructor. All course members were invited as participants, and the instructor had administrative rights that allowed for any revisions and changes on the wiki, while the students were all included as editors which allowed them to edit and revise their submissions as well as leave comments on other students' pages.

In order to become familiar with the wiki, its features, and capabilities for personal contributions, all students attended a training session. Students had access to computers to learn how to use and experiment with the basic wiki tools that allowed submission of text and image. Some students who had previous experience with a variety of computer applications immediately noticed similarities with word processing programs, such as email attachments and picture uploading. Other students who had limited exposure to working online expressed that they were feeling rather challenged by the novelty of most elements covered during the introduction of the wiki. They needed extra time to adjust to the pace of the rest of the class. Because of the differential levels of comfort using the technology, ongoing support and help were available throughout the semester. Most students were able to practice entering text, attaching files on their own pages, editing, and providing comments on the site during this training session. For others, instructor and peer support were provided to begin building more familiarity and comfort with the wiki based on their current skills.

Method

Participants

The study involved nineteen students enrolled in a graduate level Multicultural Counseling course. Seventeen students were female, and two were male. Their ages ranged from 24 to 55 years old, and all students were Caucasian.

Instruments

The goal of the study was to describe the application of a wiki used in the process of developing multicultural counseling competencies through a course assignment. For this purpose, four different instruments were used. The main instrument for this study was a *Task Specific Survey*, administered to students to reflect on the assignment itself and the utilization of a wiki for its completion. The *Task Specific Survey* consisted of fourteen open-ended questions, developed by the researchers, and investigated students' use of the wiki as a medium for developing equity competences. The questions explored students' reflections of use of wiki as well as their perception of the fit of the technology medium for the purposes of the activity. The data from this survey was qualitatively analyzed, and a sample of the coding categories from this analysis is included in Table 1.

Four other instruments were administered to account for students' self-perceived ability and comfort using computers as a needed skill in order to be able to use wikis. They were labeled as *Use of Technology and Internet Questionnaires* and assessed students' general approach to, use of, and perceived efficacy of technology, a combination of four questionnaires were used. The questionnaires were adopted from Sam, Othman and Nordin (2005). The first questionnaire explored the amount of time in a week the participants use Internet and their purpose of using the Internet.

Table 1: ***Qualitative Analysis Categories***

Category	Example
Accessibility: Viewing, commenting, reflecting	"I liked being able to view others' work easily and being able to comment on things right away." - Participant 3, Question 1
Navigation: Previous technological experience, practice, and training in preparation for use	Working with Wiki was made easier by "knowledge of computers in general." - Participant 13, Question 4
Advantages: Open, honest dialogue, visual benefit for visual learners, insightful for new perspectives, feedback, convenience	"We were able to have an open dialogue on each other's pages." - Participant 14, Question 7
Disadvantages: Impersonal, more training necessary for less experienced/comfortable users with adequate number of computers, uploads	"In the future, allow more time in class to use the program and practice." - Participant 3, Question 12
Positive Outlook for Wiki	"Continue using it!" – Participant 6, Question 12

The second part of the *Use of Technology and Internet Questionnaires* reports consisted of three questionnaires that assessed different domains of technological proficiencies and efficacy. For all questionnaires a 5-point Likert type scale (1 =strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5=strongly agree) was used. The first questionnaire was the *Computer Anxiety Scale (CARS)* developed by Heinssen. Glass, and Knight (1987) to assess individuals' perceived level of computer anxiety. Total scores range from 19 to 95 with lower scores indicating less degree of anxiety using computers. Cronbach alpha value of 0.6334 was reported for this questionnaire. The *Internet Attitude Scale (IAS),* published by Sam, Othman & Nordin, (2005), was a modification of the Computer Attitude Scale developed by Nickell and Pinto (1986), by replacing the word "computer" with "the Internet." It intends to measure attitudes toward the Internet, as the project in this research exclusively used Internet, it was important to specifically assess the attitudes toward use of Internet. Total scores on IAS ranged from 20 to 100 with lower scores indicating a negative attitude and higher scores indicating a more positive attitude toward the Internet. The Alpha coefficient for reliability was reported as 0.7186 for the original questionnaire. The last questionnaire was *Computer Self-Efficacy Scale (CSE)* (Murphy, Coover, & Owen, 1989; Torkzadeh & Koufteros, 1994). It assessed the perceived specific self- efficacy of use of computers. Total scores for CSE ranged from 29 to 145 with lower scores indicating lower perceived confidence in one's ability to use computers and higher scores indicating a high degree of confidence in a one's ability to use computers (Durndell, Haag, & Laithwaite, 2000).

Seventeen students completed the four self-assessment scales, and the descriptive analysis for self-reported data on students' computer use, attitudes, anxiety, and self-efficacy is provided in Table 2.

Table 2: ***Questionnaire Summary, n=17***

	Min	Max	Mean	Median	Mode	SD
Internet Use	20	43	31.3	32	32	5.3
Computer Anxiety	49	66	55.7	55	54	4.3
Internet Attitude	49	70	59.7	60	58	4.6
Computer Self-Efficacy	68	143	117	116	136	20.3

Results

A major finding of this study was that students acknowledged and appreciated the opportunity to gain access to the work of all of their peers at a time and place convenient. Limited class time is often a challenge for being able to see, analyze, and discuss all peers' work. The opportunity to react to one's own as well as on others' thoughts in a classroom is further challenged by the need for a deep self-reflection that often is constrained by time, class size, and personal space needed for thoughtful reflection. The wiki provided the combination of personal and collaborative environment where the process of building multicultural counseling competencies was aligned with the individual, group, and professional mechanisms involved. Further, the students noticed that the in-class discussions were enriched by having the context of everyone's work familiar to all, and the classroom discussions were deeper and building on a substance provided by the work of students themselves. As Participant 6 noted, "Continue using it! It's a pretty simple process and almost creates a classroom outside of the classroom" (question 12). This comment was supported by reports that the wiki-based work provided a venue for an open, honest dialogue as "It gave good insight into other's thoughts and provided good feedback" (Participant 10, question 9). More support for this view was given by Participant 14: "We were able to have an open dialogue on each other's pages" (question 7).

The permanent nature of the entries and comments allowed further for a deeper analysis of multicultural issues over a long period of time. The professional conversation from the classroom was extended in the wiki through notes, comments, and assignments even after the assignment was due and graded. That opportunity was a starting point to development of a safe community, one that could be later expanded in the field when professional challenges could be discussed with trusted colleagues and professors. The role of the instructor in this online-expanded learning community was critical but also flexible. The instructor's presence was initially one of an initiator of the student discussion and later became one of a participant who simultaneously guided the discussion toward specific issues of social justice and equity.

There was a marked difference in student responses related to the use of the specific – and in most instances, new – environment for the assignment: the wiki. There was a consensus that

working with the wiki was made easier by "knowledge of computers in general" (Participant 13, question 4). The immediate response to the wiki was favorable by those who reported familiarity and experience with computer applications, while the ones who had more limited exposure to these tools recommended: "Longer training so that students could explore the site more and potentially allow for stronger projects" (Participant 14, Question 12). Participant 3 suggested that "In the future, allow more time in class to use the program and practice" (Question 12), while Participant 8 identified one feature of the assignment that was most challenging: "The most difficult part was uploading pictures" (Question 5).

The self-evaluation computer proficiency data analysis indicated that students used computer mostly to email, research, for other educational purposes (assignment submissions, course management systems and the like), and also for entertainment and social networking. Students felt they had sufficient skills to effectively complete computer-based tasks related to these. They reported that they are willing and able to continue expanding their computer-based skills, and that they look forward to using computers in their job. The students who rated their general comfort and ability to use computers lower (undecided=3 to strongly =5, n=4), indicated that the strength of the wiki was "being able to see other students' work" (Participant 3,4 and 17, Question 1), and indicated the instructor and technology mentor (Participant 16, Question 4), and the similarity of the program to other common programs they use (Participant, 4, 13 and 17, Question 4) as helpful. These students however stated that wiki pages were "impersonal" (Participant 4,13,16,17, Questions 5 and 8) and indicated that they felt "disconnected and isolated" (Participant 4, Question 8) from peers. These students preferred in-class personal discussions.

Discussion

The use of a wiki was preferred for this assignment because its read/write capabilities are further complemented by opportunities for individual as well as collaborative work. Students were able to use, revisit, revise, and make changes as necessary to complete the project. PBworks.com promotes a collaborative template for educators that met the needs of the course, the course project, and the envisioned plan for implementation. The use of the technology-based assignment was aligned with a major recommendations made by Lewis, Coursol, Khan, and Wilson (2004) that counseling training programs should make active steps to exposing and including students in the use of technology for counseling purpose. The features that determined the wiki as a choice for this project were: (1) availability of password protection, combined with invitation-only choice of participants provides the needed security for the course. (2) Administrative rights were available to the instructor as well as to students and other professional participants if/when needed. (3) Administrative control over access to parts of or the whole wiki allowed the instructor to manage students' access based on students' familiarity with wikis and their comfort level using technology, which were features of the assignment selected to reflect the recommendations on ethical use of computer technology and Internet in school counseling expressed by Macklem, Kalinsky, and Corcoran (2004). (4) The requirements for this assignment asked for a picture, a personal narrative, and subsequent comments from students and instructor. The wiki offered an editor with link attachment capabilities that allow for all these items to be located and used similarly to other word processing, online, and social and networking tools. Entry edits were available at all times. (5) Assignment reflections could be entered directly in the text fields, or attached as documents. (6) Sharing the assignments and asking for or receiving

peer and instructor feedback were all available on the same site, and the assignments could be easily referred to in future work that also utilizes the wiki. The communication could continue, and the work can be revisited later after more work has been completed to seek new insights and reflections. (7) Through the utilization of a wiki, the counselors-in-training were presented with a tool that could be incorporated in their future practice, either in counseling students or in professional exchange and collaborations. (8) Wikis also could further be utilized as a class opportunity to proactively explore, analyze, and reflect on multicultural issues, and simultaneously improve their technology skills. Assignment extension could include uploading of videos and relevant commentaries. Through these observed features, the discussed Internet-based assignment was in alignment with the recommended Internet-related counseling practices established in 1999 by the Association for Counselor Education and Supervision (Attridge, 2004).

Outcomes

There were several outcomes from the wiki implementation that were relevant to the process of developing multicultural competencies. First were the observed accountability and timely response from all participants, which allowed students to engage with a challenging yet informative task in an environment that could be utilized in their future work with clients in schools. The environment and the task required participation, reflection, and response from every student, while students were accountable to the professor as well as their peers. Meanwhile, students developed a sense of community and belonging as they realized that they were not alone experiencing or feeling the way they do. These qualities were representative of the nature of an inclusive multicultural community.

The online forum also provided a venue for students to share opinions, feelings, and concerns, and although the contributions were not anonymous, students felt less exposed when sharing their thoughts. Further, students had additional time to think and reflect before sharing their ideas, and their comments were professionally formulated and in-depth. Combined with the assignment features described above, this online class work is one step toward creating a virtual counseling community as described by Sabella and Halverson (2004). The online discussion was still referred and expanded in class, but meanwhile, it afforded more class time for other activities.

The implementation of technology-based tools for work and collaboration in a multicultural counseling course was of special value. Discussions of multicultural issues are often sensitive in nature as they challenge one's own belief system and require that participants expose attitudes that might be in conflict with other's point of views. Thus, this type of student work is subject to the challenges that counselors face in their practice, and therefore is requires consideration of issues of ethics and confidentiality (Lewis et al., 2004; Macklem, Kalinsky, & Corcoran, 2004), as some students might hesitate communicating these in fear of inappropriateness of offense to others. Others need extended time to formulate their existing ideas and thoughts on a topic, but with limited class meeting time, these discussions are cut short for other issues to be discussed. In addition, new ideas and reactions to discussions arise at a later time, and it might not be possible to accommodate these in class. The use of online-based, immediately available tools where the in-class discussions can be extended over time, benefits the students as well as the

instructor who will be able to identify additional topics and issues that will support future counselor's multicultural work.

Limitations

There were several limitations to this approach of developing multicultural counseling skills through technology utilization. Technologically less advanced students felt less comfortable using the wiki without significant previous experiences with the tool. Their need to master technology skills threatened the learning competencies that were the focus of the assignment. The comfort level with technology for different learners was different, and for some students the initial learning curve of participating in the assignment through technology took longer. This confirms the findings of Carlson, Portman, and Bartlett (2006) that the personal comfort with technology is the most important factor in counselor's use of technology in practice. As a result, some students were potentially prevented from fully benefiting from the assignment and the capabilities offered from the wiki due to lack of previous technology experiences. Lewis et al. (2004) suggest that students who have greater challenges using technology are identified and exposed to technology-based experience. The assignment of this study provided an opportunity for these students to begin developing more advanced technological proficiencies.

Another limitation was that some students occasionally dominated the online discussion. This dominance can be related to more advanced technology skills, or can reflect the classroom status quo; either way, the instructor was not immediately present to balance the discussion and the contributions, and this potentially influenced the direction and the effectiveness of the online conversation. Similarly, in the online format the instructor was not able not address some student misconceptions on the spot, as it would happen in a classroom environment, and there was a need to revisit the online situation and then explain and clarify important points in more depth in class. Another limitation was the absence of visual of students' expression through body language: the instructor was not provided any input of students' reactions to the online conversation through body language that signaled possible hesitation or willingness to participate in the conversation. These were missed opportunities to invite students into the conversation.

Conclusion

This project on implementing technology tools in a school counseling education program uncovered the spectrum of issues that need to be addressed in terms of developing and promoting skills that are aligned with the digital nature of communication and social contact present in schools and society today. As Owen and Weikel (1999) claim, school counselors feel inadequately prepared to use computers in their work. Partially, the roots for this lack of skill could be sought in their preparation programs, as students in counseling programs and their instructors report not being prepared to use technology in their work (Owen & Weikel). It is not reasonable to expect that once in the field, counselors will develop significant interest and skills in the use of technology. Therefore, incorporating technology in counseling preparation courses serves as introduction to various methods of appropriate use of technological tools in the profession, and as a stimulus to continuous advancement in their learning about their applications in counseling student populations as well as professional development. Even further, counselors will thus support the movement toward technology literacy becoming a key 21st century skill

across schools. However, the research on utilizing technology in counselor education is scarce (Van Horn, & Myrick, 2001).

We observed that three fields intersected in the effort to implement technology in multicultural counseling courses: counseling expertise, technology skill and knowledge, and multicultural competency development. The implementation of an online learning community committed to developing multicultural social justice advocacy competencies using a wiki allowed the issues within this fields to be addressed in a safe, professional, and learner-centered way. The asynchronous nature of student and instructor access and contributions allowed for students to make contributions at their convenience and readiness. Students had unlimited entries, and the availability of one's own entries to revisit and reread allowed for critical revision of possible misconceptions related to issues of social justice and for observation of personal growth and change on the continuum of becoming a social justice advocate.

Based on the composition of the class and the observed need for guidance and direction, the instructor's presence was extended over on a continuum - from initiating student discussion that is only monitored to an active instructor's involvement that steers the discussion in a desired direction, thus extending the possible applications of a wiki in a multicultural counseling course. As a result, students and instructor engage in a collaboration geared toward social justice and advocacy in a manner consistent with the technology-based nature of 21st century counseling in education, a form that will benefit from further exploration in the future.

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References

Arredondo, P., Toporek, R., Brown, S., Jones, J., Locke, D., Sanchez, J., & Stadler, H. (1996). Operationalization of the multicultural counseling competencies. *Journal of Multicultural Counseling and Development, 24*, 42–79.

Attridge, W. C. (2004). Current practices and future implications for Internet Counseling. In G. R. Waltz & C. Kirkma (Eds.), *Cyberbites: Highlighting compelling issues of technology in counseling*. 87-103. Retrieved from http://www.eric.ed.gov/PDFS/ED478213.pdf

Carlson, L. A., Portman, T. A. A., & Bartlett, J. R. (2006). Professional school counselors' approaches to technology. *Professional School Counseling, 9*(3), 252-256.

Cavazos-Rehg, P. A., & DeLucia-Waack, J. L. (2009). Education, ethnic identity, and acculturation as predictors of self-esteem in Latino adolescents. *Journal of Counseling & Development, 87*(1), 47-54.

Dahir, C. A., & Stone, C. B. (2009) School counselor accountability: The path to social justice and systemic change. *Journal of Counseling and Development, 87*(1), 12-20.

D'Andrea, M. (1995). Using computer technology to promote multicultural awareness among elementary school-age students. *Elementary School Guidance and Counseling, 30,* 45–54.

Durndell, A., Haag, Z., & Laithwaite, H. (2000). Computer self efficacy and gender: a cross cultural study of Scotland and Romania, *Personality and Individual Differences, 28,* 1037–1044.

Ergüner-Tekinalp, B., & Harper, A. (2012). PhotoVoice: Understanding social privilege. In M. Pope, J. S. Pangelinan, & A. D. Coker (Eds.), *Experiential activities for teaching multicultural counseling classes and infusing cultural diversity into core classes.* Alexandria, VA: American Counseling Association.

Heinssen, R. K. J., Glass, C. R., & Knight, L. A. (1987). Assessing computer anxiety: Development and validation of the computer anxiety rating scale. *Computers in Human Behavior, 3*(1), 49-59.

Hendron, J. G. (2008). *RSS for educators: Blogs, newsfeeds, podcasts, and wikis in the classroom*. Eugene, OR: ISTE.

Holcomb-McCoy, C. C., & Myers, J. E. (1999). Multicultural competence and counselor training. *Journal of Counseling and Development, 77*, 294-302.

Lewis, J., Coursol, D., Khan, L., & Wilson, A. (2004). Life in a dot.com world: Preparing counselors to work with technology. In G. R. Waltz & C. Kirkma (Eds.), *Cyberbites: Highlighting compelling issues of technology in counseling.* 55-58. Retrieved from http://www.eric.ed.gov/PDFS/ED478213.pdf

Lundberg, D. J. (2000). Integrating on-line technology into counseling curricula: Emerging humanistic factors. *Journal of Humanistic Counseling, Education and Development, 38*(3) 142-151.

Macklem, G. L., Kalinsky, R., & Corcoran, K., (2004). International consultation, professional development, and the Internet: School psychology practice and the future. In G. R. Waltz & C. Kirkma (Eds.), *Cyberbites: Highlighting compelling issues of technology in counseling*. 129 – 146. Retrieved from http://www.eric.ed.gov/PDFS/ED478213.pdf

McCarthy, C. J., Moller, N., & Beard, L. M. (2003). Suggestions for training students in using the Internet for career counseling. *Career Development Quarterly, 51*, 368-382.

Murphy, C. A., Coover, D., & Owen, S. V. (1989). Development and validation of the computer self-efficacy scale. *Educational and Psychological Measurement, 49*, 893-899.

Ontario Ministry of Children and Youth (2008). Achieving cultural competence: A diversity tool kit for residential care settings. Retrieved from http://www.children.gov.on.ca/htdocs/English/documents/topics/specialneeds/residential/achieving_cultural_competence.pdf

Parker, W. M. (1988). *Consciousness-raising: A primer for multicultural counseling.* Springfield, IL: C. C. Thomas.

Parker, W. M., & Schwartz, R. C. (2002). On the experience of shame in multicultural counseling: implications for white counselors-in-training. *British Journal of Guidance & Counseling 30*(3), 311-318.

Pedersen, P. (1991). Multiculturalism as a generic approach to counseling. *Journal of Counseling & Development, 70*, 6–12.

Pedersen, P. B. (2002). The making of a culturally competent counselor. *Online Readings in Psychology and Culture* (Unit 10, Chapter 2). International Association for Cross-Cultural Psychology.

Ponterotto, J. G., Mendelowitz, D. E., & Collabolletta, E. A. (2008). Promoting multicultural personality development: A strengths-based, positive psychology worldview for schools. *Professional School Counseling, 12*(2), 93-99.

Portman, T. A. A. (2009). Faces of the future: School counselors as cultural mediators. *Journal of Counseling and Development, 87*(1), 21-27.

Sabella, R. A., & Halverson, B. (2004). Building virtual communities in school counseling. In G. R. Waltz & C. Kirkma (Eds.), *Cyberbites: Highlighting compelling issues of technology in counseling*. 1-5. Retrieved from http://www.eric.ed.gov/PDFS/ED478213.pdf

Sam, H. K., Othman, A. E. A., & Nordin, Z. S. (2005). Computer self-efficacy, computer anxiety, and attitudes toward the Internet: A study among undergraduates in Unimas. *Educational Technology & Society, 8*(4), 205-219.

Sodowsky, G., Taffe, R., Gutkin, T. B., & Wise, S. (1994). Development of the multicultural counseling inventory: A self-report measure of multicultural competencies. *Journal of Counseling Psychology, 41*(2), 137–148.

Stevens, P., Dobrovolny, J. , Kean, S., & Shulman, K. (2003). The development of an online graduate counseling course: Time, team, and technology. *Journal of Technology in Counseling, 3*(1). Retrieved from http://jtc.columbusstate.edu/vol3_1/Stevens/Stevens.htm

Sue, D. W., Bernier, J. E., Durran, A., Feinberg L., Pedersen, P B., Smith, E. J., & Vasquez-Nutal, E.. (1982). Position paper: Cross-cultural counseling competencies. *Counseling Psychologist, 10,* 45-52.

Sue, D. W., & Sue, D. (2008). *Counseling the culturally diverse: Theory and practice.* New York: John Wiley & Sons.

Torkzadeh, G., & Koufteros, X. (1994). Factor validity of a computer self-efficacy scale and the impact of computer training. *Educational and Psychological Measurement, 54*(3), 813-821.

Van Horn, S., & Myrick, R. (2001). Computer technology and the 21st century school counselor. *Professional School Counseling, 5*(2), 124-130.

Appendix A: Assignment Description

Prepare your luggage based on the following rules:

- Get a large suitcase or identify an area that you can pretend that is your luggage
- The total height, length and width of the piece cannot be more than 62 inches
- The total weight of the luggage cannot be more than 50 pounds (students do not need to weight their pretend luggage, but they are advised not to pack too many heavy items)
- You cannot take electronic devices as the country you are migrating to might have a different electrical power system
- You cannot pack perishable food items
- Remember that their luggage may get lost (do you still want to take that rare family heirloom with you?)
- Remember things may break while traveling, try to pack things that are not fragile, or you will not be too sad when they are broken
- You do not know what will be accessible in the new country, and you do not know how much you will afford. Make sure that you pack usable items such as clothes, kitchen utensils etc.
- Remember that you are traveling alone

After packing your luggage, take a picture of it. Then, write a brief reflection answering the following questions:

- How did you decide what items to pack?
- What did you leave behind? Were there things that you wanted to take with you but could not?
- What were your emotions going through your belongings and deciding on what to take and what not to take?
- How do you make meaning of having the emotional attachment to materials?
- What did you learn about yourself?
- How are you going to use what you learned (if any) from this assignment with your clients in the future?

Post the pictures of your luggage along with the reflections on the wiki page. Visit the other class postings, including pictures and reflections, and comment and provide feedback to other students.

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