"FACEBOOK"- IT'S NOT JUST FOR PICTURES ANYMORE: THE IMPACT OF SOCIAL MEDIA ON COOPERATIVE LEARNING

By

KISHA N. DANIELS * BILLINGSLEY, K.Y **

* Associate Professor, Department of Education Leadership, North Carolina Central University.
** Social Clinical Research Assistant, North Carolina Central University.

ABSTRACT

This paper will share the research on the use of social media (specifically Facebook) in an effort to promote critical thinking and reflection. It purports that although often overlooked as a teaching, learning and assessment strategy, social media is a viable method that supports cooperative learning through the encouragement of thoughtful responses and reflections. The research utilizes data from both quantitative and qualitative measures (surveys/questionnaires and open ended responses collected from the closed group Facebook page). The data were collected over nine months from undergraduate students who represented five different content areas (Nursing, Public Health, Psychology, Nutrition and Physical Education). The data revealed that students prefer and value the use of Facebook as a form of cooperative learning over other traditional methods of student course management (Blackboard). Additionally, it suggests that utilizing social media can be an engaging teaching, learning and assessment strategy. This research highlights the findings from a small group of students, therefore may lack generalizability. Future research should replicate the study on a larger scale. This paper includes both theoretical foundational knowledge and practical applications to support faculty teaching and learning which supports the literature by offering specific strategies, that focus on methods to increase student engagement, critical thinking and 21st century technology.

Keywords: Social Media, Cooperative Learning, Andragogy, Interdisciplinary, Facebook, Sociocultural Learning Theory.

INTRODUCTION

Higher education faculty often relies on traditional and didactic measures to support student learning, such as lecture, Q&A and solely theory-based instruction. These strategies however may fall short of collaboratively engaging the learners thereby depriving them of opportunities for successful critical reflection. The utilization of social media as an adragogical teaching and learning strategy, presents a valuable opportunity to increase collaborative learning, student engagement and critical reflection. While there is widespread appeal of social media in popular culture for networking, posting pictures, and providing updates of life events (or just updates), it is often overlooked as an instructional tool. Social media is not only aptly titled, but as a learning construct, is firmly grounded in sociocultural and social learning theories. In an effort to transform the ways in which students collaborate and reflect, undergraduates at an urban University were asked to utilize a Facebook page to record their thoughts, ideas, and to provide critical reflections on essential content. The data revealed that implementing social media as strategy for cooperative learning, garnered student responses that displayed examples of increased critical thinking.

1. Overview

With the ever-increasing popularity of the internet in education, social constructivists purport that electronic discourse positively influences cognitive development. Unfortunately, there is a void in the research literature to indicate that the use of digital technologies is related to positive learning outcomes, therefore demonstrating a need for the inclusion of technological environments that support learning is overdue. Behar-Horenstein, & Niu (2013) found that constructivist teaching is likely to involve deeper processing of material in class by learners, thus enabling the learners to reach the higher-level learning outcomes (e.g. critical analysis, synthesis and evaluation) (Harrison, Walsh & Healy, 2011). To develop such environments,

educational researchers and designers of electronic tools need to explore how to sustain productive dialogue in an electronic setting and further understand the relationship between digital technologies and learning (Amy, 2003). In 2012, the Education, Research and Training Core of the P20 grant (funded by the National Institute of Health) assumed new leadership under the direction of a faculty member from the Institution's School of Education. This new direction brought about a theoretical shift to ensure that all training activities were grounded in research proven teaching and learning theories that provided opportunities for cooperative instruction and reflection using 21st century technology as a semiotic tool.

2. Objectives

The primary goal of this paper is to provide a viable context and foundation for using social media as a method to support critical reflection. A secondary goal is to present the implications of meaningful online interaction for researchers and developers.

3. Research Questions

A closed Facebook page was initiated as an activity to increase group communication and develop cooperative learning. Seeking to understand the ways in which this conceptual framework informed and supported the Core's programming and it's impact on students, two questions emerged:

- Does the use of a closed Facebook page encourage cooperative learning and participation?
- What discussion topics are impacted by the use of a closed Facebook page?

The focus on these questions seeks to provide formative evidence to revise and/or continue programming. This paper explores how sociocultural learning theory coupled with andragogical perspectives creates the foundation to use technology to support active and flexible learning that can meet the needs of adult learners. Quantitative and qualitative data are presented to highlight the impact of the Facebook page on cooperative learning, participation and mitigating discussion topics.

4. Sociocultural Learning Theory and the Adult Learner

Sociocultural theory grew from the work of seminal psychologist Lev Vygotsky, who believed that in addition to the many important relationships that we have, family and peers, the culture at large is responsible for the development of higher order functions. Specifically, this theory focuses on how relationships influence individual learning and how instruction and learning occur (Cherry, 2013).

"The work of sociocultural theory is to explain how individual mental functioning is related to cultural, institutional, and historical context; hence, the focus of the sociocultural perspective is on the roles that participation in social interactions and culturally organized activities play in influencing development (Scott & Palincsar, 2013)."

Building on the work of Vygotsky (1997) and Wertsch (1991), it was proposed that three major themes could be found which highlight the nature of the interdependence between individual and social processes in learning and development, one connection in particular between individual development and critical thinking. He posits that as learners participate in a variety of activities that are socially mediated, they are internalizing the effects of working together which leads them to acquire new strategies and knowledge. Tudge and Scrimsher (2003) additionally note that these interactions should not be viewed as one-sided, but collaborative in that Vygotsky was interested in both what the learners bring to the interaction that support the acquisition of new knowledge and how the broader culture and setting shaped the interaction (Scott & Palincsar, 2013). This concept is most often referred to as, "The Zone of Proximal Development." According to Vygotsky (1978), the zone of proximal development is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (p.86). Essentially, it includes all of the knowledge and skills that a person cannot yet understand or perform on their own yet, but are capable of learning with guidance (Cherry, 2013).

It is for these reasons that sociocultural theory is attributed to a diverse host of uses in all educational levels. This research focuses on its current application, which supports

cooperative learning experiences whereby, teachers bring existing knowledge to students and co-construct the learning with them. However, not withstanding the attainment of new information, additional attention should be placed on the evaluation of the process of the collaboration. Herman (2013) noted that successful experiences should offer extended opportunities for discussion and problem solving in the context of shared activities, in which meaning and action are collaboratively constructed and negotiated. In other words, the process and the product are interrelated. Education must be thought of not only in terms of the transmission of knowledge, but of transaction and transformation. Therefore, the goals of assessing what happens in the zone of proximal development should be to:

(1) identify the abilities that are being developed (or that are in the process of developing), and

(2) attempt to predict what the learner will do independently in the future (Scott &Palincsar, 2013).

However, much of the learning that takes place in traditional higher education classrooms is less cooperative and more didactic. Conventional pedagogic approaches position the teacher as the designer of every aspect of the learning, including what, when and how something will be learned (Woo & Reeves, 2007). However, this approach locates the learner in a largely passive and submissive role in which the ramifications potentially foster dependency on the teacher rather than producing learner autonomy (Knowles, 1984). Encouraging higher education faculty to shift their paradigms of teaching and instruction may rest in defining the difference between pedagogy and andragogy approaches to learning and the subsequent impact on knowledge.

5. Pedagogy vs. Andragogy

Pedagogy has been defined as the art and science of teaching children (ages 4-18). In the pedagogical model, the teacher has full responsibility for making decisions about what will be learned, how it will be learned, when it will be learned, and deciding if the material has been learned. Pedagogy, is commonly referred to as or teacher-directed instruction, and typically places the student in a submissive or passive engagement role.

It is based on the assumption that learners need to know only what the teacher teaches them. The result is a teaching and learning situation that actively promotes dependency on the instructor (Knowles, 1984).

Although there have been shifts, until very recently, the pedagogical model has been applied equally to the teaching of children and adults, and Knowles (1984) suggests that this is a contradiction in terms. The reason is that as adults mature, they become increasingly independent and responsible for their own actions. They are often motivated to learn by a sincere desire to solve immediate problems in their lives as well as an increasing need to be self-directed. In many ways, the pedagogical model does not account for such developmental changes on the part of adults, and thus has the potential to produce tension, resentment, and resistance in individuals. These outcomes could be the root cause for high attrition and low retention rates at the higher education levels.

Conversely, andragogy theory focuses on aspects of how adults (ages 18-older) learn specifically emphasizing the self-directed nature of their decision-making. Programs that are catered to adults must accommodate this fundamental aspect. Andragogy makes the following assumptions about the design of learning:

(1) Adults need to know why they need to learn something

(2) Adults need to learn experientially,

(3) Adults approach learning as problem-solving, and

(4) Adults learn best when the topic is of immediate value (Knowles, 1975).

In practical terms, Andragogy means that instruction for adults needs to focus more on the process and less on the content being taught. Strategies such as case studies, role-playing, simulations, and self-evaluation are most useful. Instructors adopt a role of facilitator or resource rather than lecturer or grader. While clearly the two approaches to teaching and learning are not mutually exclusive, when applied correctly, the Andragogical approach to teaching and learning in the hands of a skilled and dedicated facilitator can make a positive impact on the adult learner (Hiemstra, 2013).

6. Making the Case for Social Media

Sociocultural and andragogical theories create the foundation for utilizing social media as a tool to develop and support cooperative learning. For Vygotsky, the key component that aids social and individual functioning, and connecting the external and the internal, are the mediation of 'Semiotic Mechanisms' (Wertsch,1991). Semiotic refers to any tools that are used to support cooperative activities. Vygotsky (1997) listed a number of examples of semiotic means: language; various systems of counting; mnemonic techniques; algebraic symbol systems; works of art; writing; schemes, diagrams, maps and mechanical drawings; all sorts of conventional signs and so on (p. 137). John-Steiner & Mahn (1996), additionally offer that semiotic means can include: computers, calculators, paint brushes and the like, all of which are useful in any representational activity. Moreover, Wertsch (1991) provided the metaphor of a socially provided tool kit of semiotic means. Those means and practices, which become internalized and available for independent activity, are critical in supporting and transforming mental functioning. Therefore, semiotic tools can be viewed as both facilitating the co-construction of knowledge and the means that are internalized to aid future independent problem solving activity (John-Steiner & Mahn, 1994).

Building upon the idea of semiotic mediation through the use of external technology tools may have seemed a far reach at the time that these seminal works were written. However, no one could have imagined that in 15-20 years, technological explosion would be our reality. Moreover, no generation has been more prepared to test the ways in which knowledge is shared, tested and co-constructed than the Millennials.

The Pew Research Center (2010) reports that the characteristics of roughly 50 million Millennials who currently span the ages of 18 to 36 vary by region. The differences are attributable to social and economic conditions; nevertheless, they are generally marked by an increased use and familiarity with communication, media, and digital technologies. In comparison to other generations, the Millennials differ markedly in this arena. Millennials' technological exceptionalism is not just limited to the number of gadgets, but in the way they fuse their social lives into them (Figure 1). Millennials are also more likely than older adults to say that technology makes life easier and brings family and friends closer together. This is evidenced by data that highlights, "Since the year 2005, the number of adults, aged 22-35 who use social media sites has risen from 8% to 72% (Duggan & Brenner, 2013), a disaggregated view of the data provides additional information on the demographics regarding who uses social media (Figure 2)".

Murray (2013) states, given that users of social network sites are also connected through a variety of digital devices advances opportunities for information collaboration

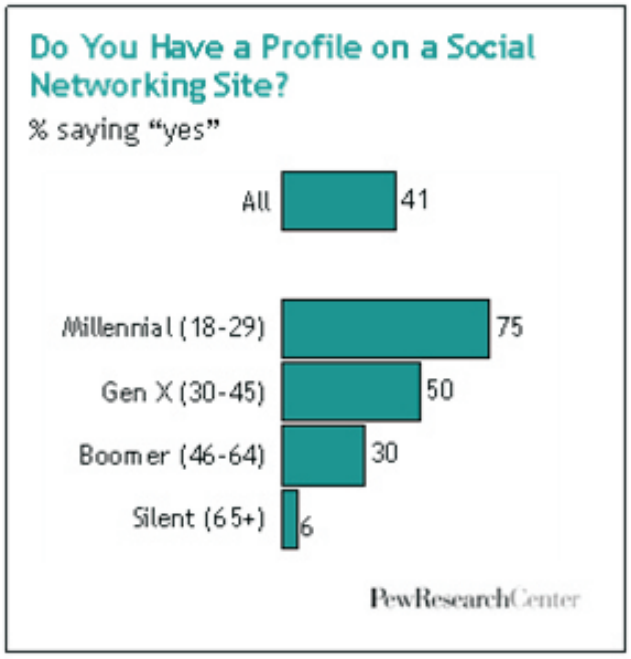


Figure 1. Generational Social Networking Differences (Dugan & Brenner, 2013)

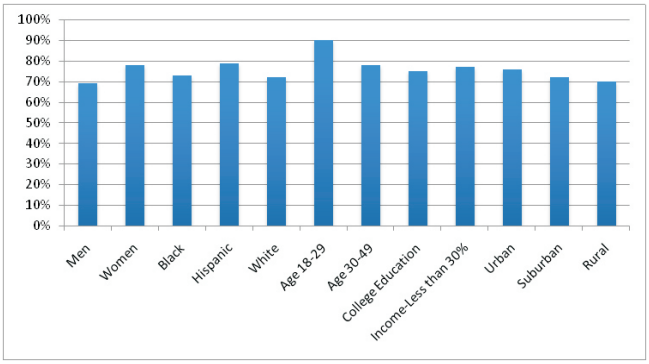


Figure 2. Who Uses Social Media?

without restrictions of place or time. These technological conveniences are advantageous and can facilitate social activity for formal or informal personal, business, or educational purposes. The inclusion of social networking within the context of education is supportive of adult learners and has the potential to support and shape instruction, making it more active, participatory, personalized, flexible, and inclusive (Laurillard, 2008).

7. The Project

The Center for Translational Heath Equality Research (CTHER) supports the Education, Research and Training Core (Ed. Core) of the National Institute of Health's P20 grant. This component of the grant is responsible for recruiting Non-Science, Technology, Engineering and Mathematics (STEM), Undergraduate majors into a training program which seeks to develop, enhance and/or strengthen the training activities that prepare them to conduct meritorious minority health disparities research in minority communities. One of the ways in which the grant seeks to meet this goal is through implementing strategies that help the students deepen their knowledge of cultural sensitivity, ethics and an understanding of the many facets of the societal, institutional and financial issues surrounding minority health disparities. This goal of broadening health disparities research is being met through a three pronged approach of engaging students through the planning and implementation of direct and didactic laboratory preparation, field work and other authentic experiences and additional training activities. The grant is in its second year of a five-year cycle and during this time over 20 non-STEM Undergraduate and Graduate students (referred to as CTHER Fellows) have participated (14 students are currently participating). Due to the intensive focused nature of the training program, the population intentionally has remained small. The demographic data presented accounts for 24 program months, however, due to the change in leadership, the data regarding the intervention was collected over a 10-month period.

8. The Population

The program selects 8-12 students per year. These students range in age from 19-34 and are demographically reflective of the population at the urban Historically Black

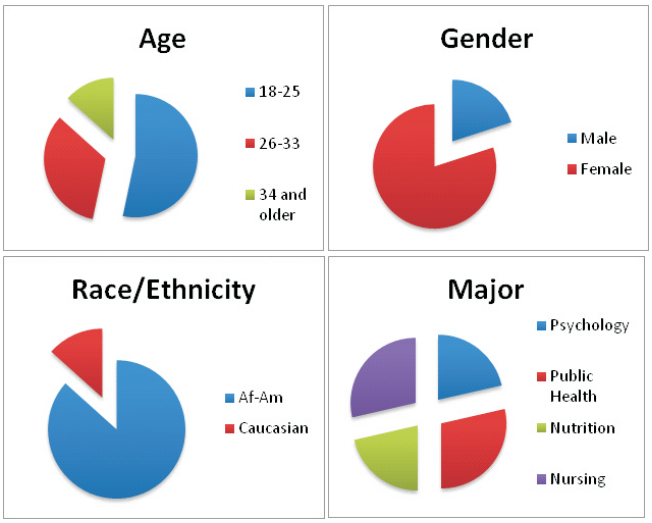


Figure 3. CTHER Fellow Demographics

University/College (HBCU) for which they attend (Figure 3). Additionally, they represent the different social science areas: Psychology, Public Health, Food and Nutrition and Nursing, and attend the core activities as an "add-on" to their existing program of study within their major. Students receive compensation for participation in the grant for working in bench science (cardio metabolic/cardio vascular), dry science (bioinformatics), or field science (community outreach) laboratories, as well as attending monthly Education, Research and Training Core monthly meetings.

9. The Intervention

The monthly meetings (which last for 2.5 to 3 hours) provide an opportunity for fellowship and to present and discuss content (issues related to persistence, resiliency, research, minority health disparities, and health related current events). Either the Principal Investigator or the Program's Research Assistant facilitates the presentations. Given the fact that the meetings are infrequent, the authors designed a closed Facebook page to keep the students up-to-date with important messages and information of interest (conferences, articles, interesting websites, etc.). The authors chose Facebook due to the literature that suggests that it has the most widespread usage of 18-30 year olds (Duggan & Brenner, 2013). Figure 4 highlights this information.

Originally, the genesis of the page was to present information, however, it was noted that overtime, the

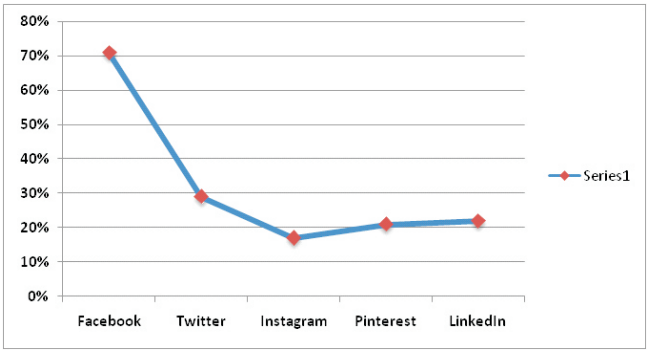


Figure 4. Social Media Usage(Duggan & Brenner, 2013)

students began to use the page to respond to the meeting presentations. Additionally, further investigation showed that the responses were becoming cooperative in nature. Cooperative learning is a teaching strategy in which small groups of students with differing knowledge levels are presented with a variety of learning activities to improve the understanding of a subject. The learning becomes cooperative when each member of the group begins to take over the responsibility of learning new concepts and also helps others in the group to learn the concepts. The data offered that, this is what happened as a result of increased usage and participation on the Facebook page. The students were continuing the conversations started during the meetings and embedding other essential content that is related to the content as well as seeking out new information. Through the analysis offormative survey data (mid-year program evaluations) and online discourse (Facebook page comments), the initial work has revealed that, social media is a viable vehicle to develop cooperative learning, to inform and process the face to face discussions that focus on minority health disparities, and persistence and resiliency.

9.1 Does the use of a closed Facebook page encourage cooperative learning and participation?

As previously mentioned, the use of social media has not been widely used in teaching and learning, although there is support for using it as an efficient instructional tool. However, in everyday encounters in informal settings, young people are surrounded by and immersed in technologies. A Kaiser Family Foundation report (Rideout, Foehr & Roberts, 2010) shows that the average adult spends over 35% of the waking day (roughly 12 hours) using their mobile phones and computers to do text messaging, talk to peers, listen to music, play games, and watch other media. The three most popular activities being, visiting social networking sites (e.g. Facebook, Instagram and Twitter), playing computer games, and watching videos on websites (e.g., YouTube). Not only do these abundant technology experiences affect how they socialize, communicate, and learn, but also they offer a glimpse into the world that motivates the students whom we teach. If students are to develop the competencies of being a self-regulated, independent, lifelong learner, they will need to learn how to learn in informal settings, as there is a semiotic relationship between formal and informal learning (Murray, 2013). The CTHER Facebook page was designed to efficiently and cooperatively discuss pertinent issues related to the program's foci. The page went live in June 2013, and in the beginning, students were prompted to check the page to find out about "housekeeping" items (i.e., dates for meetings, timesheet reminders, agendas, etc.). The majority of the posts between June and October were posted by the Ed. Core faculty/staff. While the students would "like" a post, they may not have always chosen to respond to the post. In an effort to increase the traffic and to develop cooperative learning, the Ed. Core faculty/staff took a two-pronged approach to increase the cooperative accountability. The first strategy was to adopt a low-risk entry, in which students were simply invited to post pictures and/or websites that they felt were related to the monthly meeting topics. The second was the adoption of a mid-risk entry, which required each student to be responsible for posting a response to a question comment and or thought/quote that would be posted by an Ed. Core faculty/staff after each monthly meeting. The data collected from Facebook entries and the mid-year program evaluations/surveys regarding the usage indicates that, not only did the usage increase, but also the students overwhelmingly responded that they view the Facebook page as a helpful tool (Figure 5. and Figure 6.). The data regarding average usage per month may be skewed in June-Sept and February. In June-September, there were 5 full-time students enrolled in the program versus October-February, when there were 14 students enrolled (additionally, February has fewer days in the month). However, the "low and mid-risk entry" directives

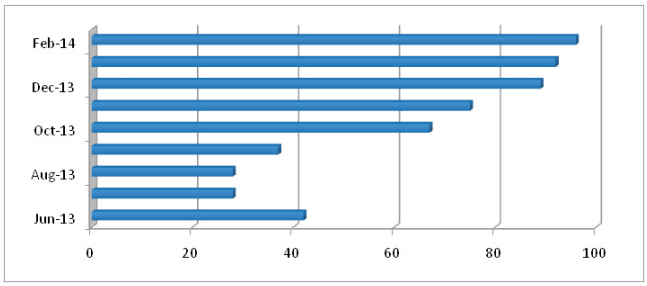


Figure 5. Average Facebook Responses Per Month

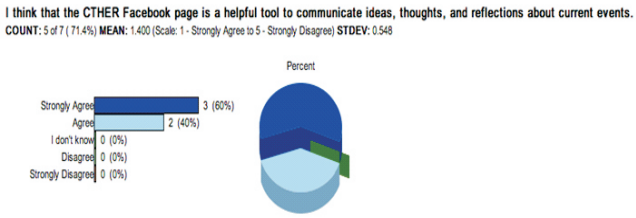


Figure 6. CTHER Fellow's Perceptions of Facebook Page

were implemented in October and November 2013. The higher usage rates are directly attributed to these directives. The data collected from the CTHER mid-year program survey notes that the students perceive the Facebook page as being a useful tool to help communicate thoughts, ideas, and to reflect on current events (Figure 5).

9.2 *What discussion topics are impacted by the use of a closed Facebook page?*

One goal of this paper is to re-conceptualize online interactions through the use of social media in terms of cooperative learning based on sociocultural learning theory. Analyzing interactions through this lens may yield the design principles needed to improve the quality of adult learning environments. For Vygotsky, (1979) cognitive, social, and motivational factors were interrelated in the development of higher order thinking. Thus, it makes no sense to evaluate the benefits of peer collaboration in purely intellectual terms, (e.g., via individual achievement testing). This perspective also implies that the outcomes of peer collaboration must be evaluated in context and over time. (p. 218).

For this reason, the data collected to measure this question was derived directly from the Facebook page posts. Measuring cooperative learning and critical thinking are purely qualitative efforts and are not easily quantifiable. Some of the monthly meeting foci revolved around issues related to persistence, resiliency and societal issues that impact minority health disparities. These constructs were cited most often in a review of all posts.

9.3 Persistence and Resiliency

Without question, there is a crisis of diversity in regards to retaining under represented populations in majors that lead to research careers. Despite steady increase in the numbers of underrepresented populations completing degrees, the rates at which these students graduate and continue in a STEM or research focused field are stagnate as compared to their Caucasian counterparts. Additionally, Byars-Winston & Estrada,et. al (2010), state that under-represented students make informed decisions about retention based on factors that are interconnected among culture, social and environmental dynamics, but the decision to persist can be mitigated by teaching and informing students about coping skills and strategies. Successful implementation of these strategies can lead to continued matriculation to graduation and further pursuit of postgraduate research.

9.4 *Issues that Impact Health Disparities*

The focus on minority health disparities in context, prepares the students to evaluate and judge the array of societal and institutional issues that are embedded in the maladies. Increased knowledge in this area coupled with the required laboratory work will provide with a holistic view of the problems. This translational view supports scientific self-efficacy or the ability to view themselves as researchers.

10. Data Collection

The data from the mid-year survey noted that the students perceive that the monthly meetings provide relevant and important information about these issues. This data is presented in Figure 7. Subsequently, once the CTHER Fellows began increasing their use of the Facebook page, the faculty/staff posts began to take a back seat to their own mediated posts. These posts provided analytical information to help guide us to and through their thinking.

An outcome that can be attributed to the increase in usage and favorable perceptions were increased efforts to understand and learn the concepts that were discussed

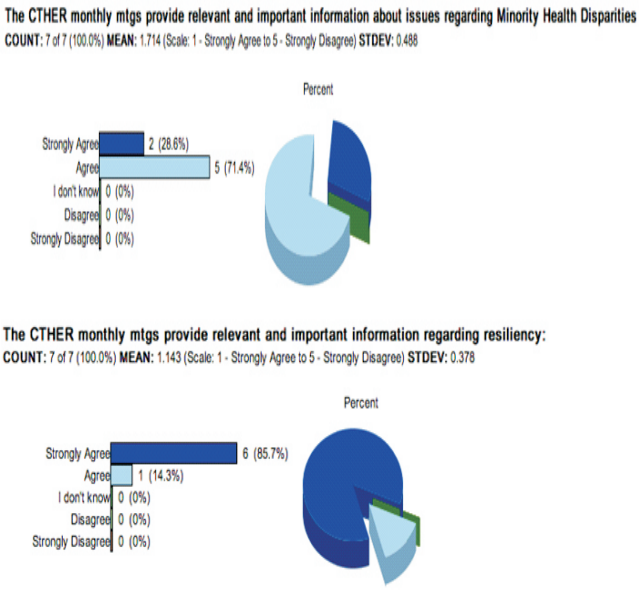


Figure 7. CTHER Fellow's Perceptions of Topics Covered in Monthly Meetings

and taught during the face-to-face meetings. The posts offer a glimpse into the student's thoughts and understanding regarding the topics. Additionally, the student responses to each other and informational posts displayed critical ideas, questions and opinions. These responses often challenged a student's perceived knowledge and through high-risk entries and conversations with other group members, new knowledge emerged. This is indicative of cooperative learning. High-risk entries provide more personal information, highlight examples of critical thinking and offer problem-solving comments to peers. These examples may display themselves as (but are not limited to) sharing personal hopes/ dreams/ expectations, evaluating and judging systems, answering questions that are posed by other participants and sharing connections to topics covered in the monthly meetings. We attribute these occurrences to the participants feeling more comfortable with the process of sharing their thoughts, ideas, reflections and comments on the CTHER Facebook page. While this may have been something that they were used to doing in their social circles (informal setting), they may not have been used to doing this in an educational setting and with new people (formal setting). These "high-risk entries" offered a window into how the participants were being impacted by the topics of persistence, resiliency and minority health disparities. For example, after a clinical field experience to two hospitals in urban areas, one student posted,

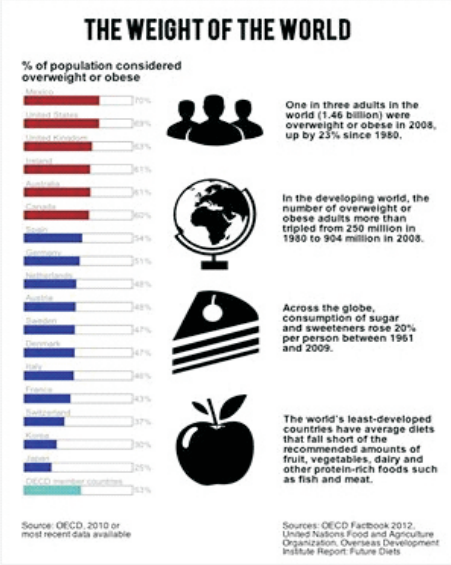
"I'm ready to save the world (or at least do my part)! My experiences at Bellevue and Harlem Hospitals were inspiring. Although I am familiar with obstacles that rural areas face with continuity of care, access to care, and major health issues, this was my first exposure to the obstacles that urban areas face. I was challenged to step outside of my comfort zone of only thinking about issues that are faced in my community and truly recognize that the world is our community."

When asked about how one might feel if they were in the minority at a majority institution, a student thoughtfully responded,

"I believe some of the biggest challenges I would encounter attending a University that is predominately Caucasian would be feeling a sense of belonging. In addition, I believe it would be difficult for me to not be around people on a regular basis that I can't identify with. My experiences in academics thus far have been at HBCU's. I completed my undergraduate work at South Carolina State University and now I' am here at_____. I have always been in a classroom setting around people of my color and have found it to be a very comfortable environment in which I can thrive in. However, I' am hoping to complete my Doctorate at a University that is not an HBCU. I feel that it is important for me to become more diversified in attending a University that is not an HBCU. Lastly, I believe in order for me to thrive in this type of environment, I would have to adjust, and keep in mind my goal of becoming the best that I can be in my field and not let anything deter me from that."

After a discussion about childhood obesity, diabetes and urban food deserts, a flurry of comments (two are presented) were posted in response to a participant's posting of an article as shown in Figure 8.

"It is very interesting. I think it is related to the health care system as well. Japan and Great Britain have single party payer systems while ours is a third party payer system. Japan is in the top for life expectancy and at the top for low infant mortality. Places that have universal healthcare have a tendency to be more healthy."



The United States and Mexico are now effectively tied for most obese in the developed world: http://to.pbs.org/1fsRjTu (from PBS NewsHour)

Figure 8. CTHER Fellow's Article Posting

"This was very interesting yet shocking to see. I was very surprised to see places like Australia and the United Kingdom close to the top. This is proof that Obesity is not only a problem in our homeland but all over the globe."

Lastly, when prompted to discuss the issues related to the story of Henrietta Lacks, some students had this to say,

"All of these threads stand out to me throughout the novel because they are all interrelated components of the Henrietta Lacks story and African American history. Race, science, faith, and poverty allow Skloot to reach a variety of audiences, and make this novel a great American story."

"What stands out to me the most is the racism of it all. It shocks me that as much as black people have contributed to history as well as science, other races still look at us as less than. It is crazy how they have USED us for years and it still takes so much triumph to receive credit for our contributions."

"Racism definitely stuck out to me because I had no idea how much racism still effected African Americans in the 50's. There were horrible studies conducted on them which were never even told!! The story of Elsie really struck a cord with me and also the way the African Americans were separated in order to receive lesser healthcare. I even felt ashamed because I wasn't aware of these horrible things that were going on!"

11. Findings

These responses are all examples of critical thinking that are supported by the use of social media. Hiemstra (2013) supported this idea by offering that, it is the ability to carry out individual learning long after the stimulation of some activity like a class or workshop is completed that we believe are the results from attention paid to the individual needs of the learner and the instructional process.

Additional ancillary data suggests that the CTHER Fellows are on track to meet the overall goals of the grant, which are to increase the pursuit of post secondary degrees by under represented students and for these students to desire to continue meritorious research in minority health disparities. Figures 9 and 10 evidence these outcomes. All of the students in the current cohort are planning on attending graduate school and the majority of them are interested in pursuing careers in research. Two students indicated that they are either not interested in or undecided about research careers; the authors view this as an opportunity to shift their desire by including additional

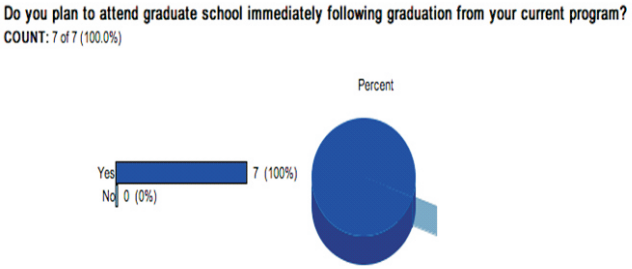


Figure 9. Indication of Graduate School Pursuit

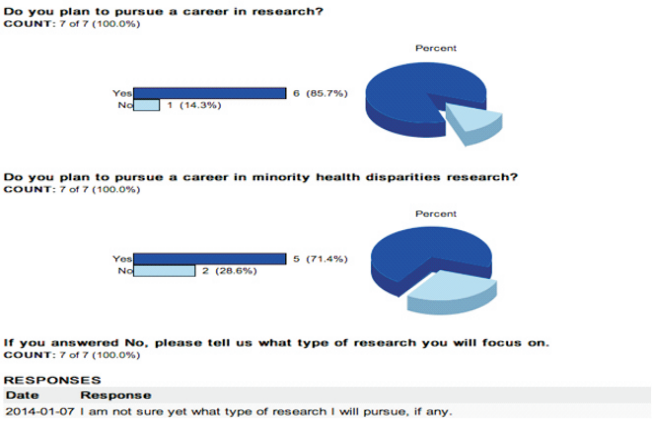


Figure 10. Indication of Research Interest by CTHER Fellows

program activities during their remaining time in the program. Given that, these two particular students still have over 8 months left in the program, the authors will re-evaluate this measure and hope to see different outcomes.

12. Recommendation

In considering replication, the authors note that continued research may need to include a larger sample size. It may also be helpful to consider using a course that has one content focus, as this study had participants who represented four different content majors. Additionally, it is important to note the speed at which technology moves. While Facebook seems to have stood the test of time (thus far), new social media platforms, mobile applications and sites are being developed everyday. It is hard to keep track of all the various social media outlets that can be used to support instruction. New research may consider using this research as support for a conceptual framework, but implementing a strategy using a different social media site (i.e., Instagram, Edmodo, Web 2.0, etc.). The current research will continue with the implementation of two additional cohorts over the next three years. This will impart supplementary data to aid in program revision and development. It is hopeful that continued successful, strategic implementation would lead to increased interdisciplinary collaboration through cooperative learning, thereby influencing self-efficacy and increasing the likelihood of the pursuit of careers that positively impact health disparities research.

Conclusion

Critical thinking skills are immeasurably important. Higher education experiences should take every opportunity to foster, facilitate and teach students how to think critically. However, strategies for meeting this challenge differ at varying levels. Traditional lecture style, didactic methods of teaching do not meet the needs of our target population, the adult learners. These learners receive, process and implement information in ways that will require concerted attention on the use of digital technologies as a method to facilitate the acquisition and retention of knowledge. The use of social media in education is theoretically grounded in the work of sociocultural theory and has been demonstrated to support cooperative learning, increase understanding of new content and the transfer of knowledge in the context of real-life situations.

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ABOUT THE AUTHORS

Kisha N. Daniels is currently an Associate Professor at North Carolina Central University in the Department of Education Leadership. She is also the Principal Investigator of a National Institute of Health grant where she provides leadership to faculty through presentations/workshops that focus on diverse teaching strategies. She holds a Doctoral Degree in Education Leadership, two advanced degrees in school counseling and administration, a specialist certification in curriculum and instruction, and a B.A. in elementary education. She is actively involved with building and sustaining community partnerships in an effort to extend the scholarship of teaching and instructional leadership through service-learning strategies, which positively impact teacher quality, student achievement, and community engagement.

Billingsley is a Doctorate of Philosophy in Counselor Education and Supervision Candidate at North Carolina State University. She is a Graduate of North Carolina Central University where she received a Master of Arts in Career Counseling and UNC Chapel Hill where she earned an undergraduate degree in Political Science. She has over 15 years of experience working in higher education recruiting traditional and non-traditional students and serving as Program Manager. She also specializes in working with mid-career professionals. Additionally, she has experience in private practice and community mental health serving individuals with a myriad of mental illnesses.