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## **Literature Review: Barriers to Participation in the Online Learning Environment: The Role of Race and Gender**

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**Abstract:** As the number of adults participating in online learning continues to grow, it is important that adult educators, curriculum designers and the administrators of those programs understand the nature and characteristics of the adult learners filling those programs. Just as there are concerns about the efficacy of learning within traditional classrooms, there needs to be equal concerns about the effectiveness of learning in the online environment. An important question to be addressed--What is the significance of race, ethnicity and gender in the online learning environment?

**Introduction:** Adult education has always been contextually driven (Merriam, Caffarella, and Baumgartner, 2007). The pervasiveness of computer and technology has created dramatic changes in society; requiring a significant proportion of the adult population both in the developed and emerging economies to seek new and additional skills through training and redevelopment. Through access to inexpensive computers, PDAs, smartphones, and other mobile devices whose bandwidth continues to expand exponentially, online learning is more accessible, and affords the adult learner the time and convenience to acquire desired learning necessary for retooling and retraining. Adult learners are motivated to gain a college degree or expand existing knowledge and skills driven by the monetary value associated with higher learning. The National Center for Education statistics indicates an increase in enrollment in college between 2001 and 2009, with an indication that this trend will continue to increase (National Center For Education Statistics, 2011). Much of this learning is occurring in the online environment. Therefore important questions that should be addressed include: What are the barriers to participation in the online learning environment? Does gender or race act as a barrier? If so, how?

### **Relevant Literature and Theoretical Perspective**

We conducted an in-depth review of the literature. Searches were conducted for all research articles published between 1990 and the present. Many observers have noted that it was during the 1990's that the online educational programs for adults began to be offered in large numbers by accredited institutions (The Chronicle of Higher Education, 2011). The literature search revealed that race, ethnicity, and gender have a significant impact in participation of the adult learner in the online learning environment (Shattuck, 2005). The most unexpected finding from the literature review was that gender is a significant factor in the online learning environment. At least this is the perception created by the research. Gender received significantly more attention by researchers than did race or ethnicity (Rovai, 2001; Wang, Sierra & Folger, 2003). We argue that if gender is significant than surely so too must be race and ethnicity. We posit that both are socially constructed realities and should therefore manifest themselves to some extent even in an online learning environment given the social nature of learning.

How does the intersection of gender, race, ethnicity, and culture impact the online learning environment? Is the interaction online also mediated by these socially constructed differences in the same way that they are in the traditional classroom environment? Educators and practitioners who have facilitated online discussion as part of hybrid or complete e-learning know that not everyone takes part in the discussion and that the level of enthusiasm shown by participating students varies significantly (Hughes and Lewis, 2003). Research has shown that cultural

differences can impact on students' participation in online courses (Liu, Liu, and Lee, 2010). Shattuck (2005) noted that international online learners felt a "sense of marginalization, or, sometimes even alienation" (p. 187) from American learner groups. Cultural attributes can affect online presence and learner perceptions (Wang, 2004). In an online setting, students can present themselves in three ways: cognitively, socially, and emotively. Social presence is about presenting oneself as a real person in an online learning environment. Cognitive presence is about sharing information and resources, and constructing new knowledge. Emotive presence is about learner's expressions concerning feelings of self, the community, the learning environment and the learning process. Learning is maximized when students are socially, cognitively, and emotively immersed in the learning process (Wang and Kang (2006). Hence, it is important that educators are mindful of differences in cultural attributes that impact online learning presence.

Technical and structural reasons for exclusion from online learning participation have been documented to include access to computers at home or from work (Selwyn, 1998; Kirkup, 2001), computer skills and the availability of support (Miller, Kennedy, and Leung (2000), and language mastery which includes writing skills (Hughes and Lewis (2003). Since these barriers are socially constructed, it would follow that they would be directly influenced by discourses of gender, race, culture, and ethnicity. Arguably the discourse of class would also be influential. However, we do not address class separately because we assume that class is inherent to the dialogue on gender, race, culture, and ethnicity.

Issues of identity and belonging are important to attend to in teaching. Studies show that issues of identity and belonging are important to the retention and persistence of students (Read, Archer, and Leathwood 2003). Therefore, we need to inquire into why some students of color (defined to include all of the historically marginalized racial groups in the United States), students of different cultures and ethnicities, and some women do not participate in their online class or are reluctant to do so. In an effort to address this question, this literature review will examine research conducted between the 1990's to the present. Our review of literature indicated that the most frequently addressed variables include technical barriers, structural barriers, cultural barriers, and gender differences. Therefore, this literature review is organized around these salient themes.

## **TECHNICAL BARRIERS**

Technical barriers include having limited or no access to computers in or outside the home, a lack of computer skills, as well as other factors that impede access to online learning (Selwyn, 1998; Kirkup, 2001; Miller, Kennedy, and Leung, 2000). There is a digital divide that persist in America and among the world's developing and emerging nations. The common thread to this disparity is anchored in an individual's socio-economic status which is commonly determined by race, ethnicity, low income levels and the lack of access to quality education (Morgan and VanLengen, (2005). Hence, it is less likely that students of color in the United States would have a level of technical competence comparable to that of their white counterparts (United States Department of Commerce, 2002). According to Sax, Ceja, and Teranishi (2001) racial differences with technology persisted despite such key variables as parents' level of education. They concluded that technological disparities are a hindrance to students' academic success. Faced with this reality of life in a lower socio-economic background, many students of color seem unable to bridge the gap of the digital divide.

Rogers, 1995; and Norris, 200, found that the initial users of new technology are more likely to be young, male, better educated, more affluent, urban and not members of a racial or ethnic minority group. Another noted dimension of inequality in Internet access and usage is gender. Many studies have shown that women are less likely than men to use the internet (Bimber, 2000). Gender differences in the degree of access to the internet persisted through the 1990s, but the gaps seem to have been virtually eliminated by the turn of the turn of this century. In fact, by 2001 women had more access to the internet than did men (Gorski, Clark, 2001; Ono, Zavodny, 2003). Nevertheless, although men and women now have equal access to the internet, women are "less frequent and less intense users of the internet than men" (Ono, Zavodny, 2003, p. 111).

## **STRUCTURAL BARRIERS**

Formidable structural barriers continue to frustrate the efforts of minorities to achieve economic success. Racism and the prevalence of structural racism is engrained into the fabric of American society and results in unjust and discriminatory practices in social, economic, educational, and political policies and practices. Structural racism results in practices and policies that are favorable to certain groups at the expense of other groups (Barker, 2003; Barndt, 1991).

It has been more than five decades since the United States' Supreme Court desegregated public schools (Patterson, 2001). African Americans and Hispanics tend to end up attending high-poverty schools when compared to White Americans or Asian Americans (National Center for Education Statistics, 2007). Many African American and Hispanic students end up in poor school districts, which are deprived of the resources necessary for real educational opportunity. This results in these children having limited access to computers and other educational technologies. School districts across America have introduced blended and online learning into the curricula mix. For these impoverished districts, this remains an illusion. Poor districts, already deprived of resources and reduced funding from local and state governments, continue to confront an erosion of support, including funding for educational technology. This further exacerbates and complicates the digital divide addressed earlier.

McClintock (1999) asserts that e-learning radicalized access to education and thus democratizes the access to higher education. He further purports the many virtues of having access to online and hybrid learning. However, we note that this conclusion has not taken into consideration how socially constructed realities such as race and gender manifest themselves in the online environment and even possibly serve as barriers to learning. The lingering question is what effect will the digital divide have on students of color as they attempt to engage in higher education?

## **CULTURAL BARRIERS**

Another potential barrier to online learning is culture. Culture is the summation of learned behaviors by a particular group of people. It has long since been understood that there is a strong correlation between culture and learning (Guild, 1994). There is however a dearth of empirical data on the influences of cultural attributes for adults who participate in the online learning environment. There is no one single preferred learning style that is embraced by all learners. Not even individuals from the same ethnic or cultural group learn in the same way. Having an understanding of the participants' learning styles, background knowledge, and life experiences are important components when facilitating diverse adult learners. Vasquez (1990) found that the motivation to learn was significantly enhanced when the facilitation was congruent with students' learning styles.

Different learning styles are associated with different cultural groups. According to Dunn and Griggs, (1995), learning style varies between cultural groups and members of the same cultural group tend to share common learning styles. With this backdrop, there is an assumption that different cultural groups will have different learning experiences within an online learning environment. African Americans are heavily influenced by cultural practices originating from specific communities in Africa, either directly or through Black-Caribbean and Latin-American traditions derived from the African diaspora. Similarly the cultures of many Hispanic/Latino communities are deeply rooted in the traditions of the indigenous peoples of the Caribbean, Mesoamerica, and South American. Within both cultures, social institutions such as the church and the family are paramount and have reinforced and reproduced cultural uniqueness. This means that although descendants of peoples indigenous to Africa, the Americas, and Europe grow up within close physical proximity of one another, the cultural perspectives and corresponding learning styles can significantly differ. White Americans tend to be analytic, individualistic, and field-independent in their learning style. Hispanic/Latino Americans and African Americans tend to be holistic, collectivist, and field-dependent in their learning styles (Smith and Ayers, 2006). These

cultural markers and cultural differences must be acknowledged and accounted for not only in the traditional learning environment, but also in the online learning environment.

### **GENDER DIFFERENCES**

The gender differences in online interaction and behavior seem to be context dependent (Chyung, 2007). Women tend to exhibit more social behavior online than men. Men in online classes posted more messages than did female students, but female students posted more “interactive” social messages than did male students (Barrett and Lally, 1999). However, in all female groups, female participants wrote significantly more messages than their male counterparts in other online classes, but when they engaged in a mixed gender online environment, their online behavior apparently changed. These same female students wrote less in mixed gender groups (Bostick, and Lizhi, 2005).

Blum (1999) and Rovai (2001) found that the voice of students engaged in online courses is related to gender. They found that the majority of men exhibited an independent voice and the majority of women used a connected voice. The independent voice is assertive and authoritative. This voice is distant. However, the connected voice is usually supportive and caring, but not assertive (Rovai, and Baker, 2005). This finding is consistent with the research of Belenky et al., 1986. Belenky et al., (1986) found that women were usually connected knowers. As such they emphasize understanding, empathy, acceptance, and collaboration. This would indicate that women have a stronger sense of community within a learning environment. Tinto (1993) found that students in traditional learning environments who have a strong sense of community were more likely to persist than those students who feel alienated and alone. Studies into community in online learning environment have led researchers to conclude that this is also true for the online learning environment (Vandergrift, 2002; Moore, 1989).

Flanagin, Tiyaamornwong, O’Conner, and Seibold (2002) found that men and women communicated differently in mixed-gender online environments. Men were more likely to communicate with men and women just as they would in a face-to-face classroom environment. On the other hand, women preferred to reduce their social cues and therefore provide an opportunity for greater power and influence in online conversations in a mixed-gender environment (Rovai, and Baker, 2005). This implies that women communicate differently in the online learning environment than they do in the traditional classroom while men do not.

The authors hope to continue exploration the impact of race, class, gender and ethnicity on online learning by conducting a qualitative research. . This research will address the following question: Does gender or race act as a barrier to participation in the online learning environment? Ten adult learners who were or have taken classes online will be purposefully selected and be interviewed. Data from the interviews will be used to compile demographic profiles of the participants. The data will also be analyzed using the constant comparative method to uncover commonalities in the participants’ conversations. The sample will be a diverse group of adults who attended a large national proprietary institution. The participants will be located throughout different parts of the United States. Diversity is defined to include race, class, age, gender, positions, and years of experience. All the interviews will be open-ended and unstructured and last approximately one hour. Each interview will be recorded and transcribed immediately after the interview is concluded. Each transcribed interview will be carefully analyzed.

**Implications for Adult Education Theory and Practice:** The field of adult education has long prided itself as a profession that not only values diversity and that strives to foster justice and equality, but also as a profession that embraces diversity and practices justice and equality. We have long history of addresses diversity, justice and equality in the traditional “face to face” classroom. We cannot assume that these concerns become irrelevant in the online classroom. We expect that the findings from this research will reveal that the race and gender are also significant issues in the online classroom as they are in the traditional classroom. As such, we must expend as much time and energy in the online classroom to attend to these issues.

## **CONCLUSION**

A review of the current literature on the role of race, gender, ethnicity, and culture in the online learning environment reveals significant issues that educators must attend to in facilitating online courses. Students of color – including African Americans and Hispanics - have learning styles and preferences that are influenced by their unique cultures and experiences as historically marginalized groups in the United States. Most online classes are developed with the erroneous assumption that all the learners are homogeneous with respect to learning styles and preferences. This assumption privileges white male learners.

This literature review also revealed that while the digital divide between men and women is not a significant issue in the online learning environment, educators must attend to the differences in learning styles between men and women. Women are connected knowers and as such prefer collaboration and caring understanding in the online learning environment. Men on the other hand tend not to be connected knowers. Men tend to be assertive in their online communication style, while the learning style of women tends to be context-based. That is women engage more when the online class is single gender (female).

Educators who are charged with task of designing and facilitating online courses, must challenge themselves to be inclusive and take into consideration the many different dimensions of diversity that are present in the online learning environment and to design their courses to address differences in learning and communication styles between men, women, African Americans, Hispanics, and other historically marginalized ethnic groups.

**Reference available upon request**