

# **Cultural Differences in Responses of Online Learners to Design and Pedagogy Course Features and Visual Display Design Principles**

Charlene Hu

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While online instruction has emerged as a significant trend in how instruction is delivered in institutions of higher education it has also become a form of pedagogy. Internationally, distance education courses are increasingly being offered online and the model is employed by many universities in offering online undergraduate and graduate degrees. Blended courses that integrate online instructional features with face to face instruction are also offered in most disciplines as part of campus based curriculum offerings. A critical difference between online instruction and face-to-face instruction is the reliance on visual display designs (design patterns) for the representation and presentation of instructional information. Some of the traditional elements of face-to-face instruction do not generalize to online instruction. An example of such elements includes some aspects of cultural differences. Institutions of Higher Education (IHEs) in the United States invest heavily in professional development to ensure that faculty accommodate the needs of students from different cultures in face-to-face instruction. However, in online instruction there is little evidence that similar efforts are being made to determine if there are cultural differences that impact the design of online instruction and in turn the performance of online students. Yet, most IHEs in the US are actively recruiting students of diversity and many are targeting the offering of online degree programs globally.

The study to be presented represents a beginning effort by a collaborative group of researchers in investigating whether postsecondary online learners vary in their responses to course design and pedagogical features due to the students' cultural background. The cultural groups studied include Asians, Hispanic/Latinos, and Middle Easterners, African Americans, Caucasians, and Native Americans.

The methodology implemented in this study employs three sets of survey items derived from reviews of the research literature. The surveys include validated items related to 1) online pedagogical features, 2) course design features, and 3) visual design principles. Responses of individual online learners, to each item within the three surveys along with demographic information are collected online. Participants are recruited from collaborating institutions enrolling students from different cultural backgrounds.

The specific research goals of this collaborative study on researching cultural differences in online instruction at the post-secondary level are as follows:

- To begin with an examination of the basic design and pedagogical features of fully online asynchronous courses and the underlying design principles;
- To explore the need for programmatic research to validate cultural differences relative to pedagogical and design features employed in online instruction features at the post-secondary level;
- To develop research based guidelines for accommodating cultural differences among online learners in the design and teaching of online instruction;
- To stimulate interest among researchers in joining this collaborative research effort.

The purpose this study is to inform future research and to attract additional collaborators to participate in a programmatic research effort related to cultural differences in online instruction. The preliminary analysis indicates that there are cultural differences that occur among different cultural groups as measured by responses to selected items in each survey. To date the sample size in this study of responses from African American and Native American students is currently too small for a comparative analysis all cultural groups..

The initial data from this preliminary report can be viewed from two basic perspectives e.g., the differences in perceptions of respondents from the cultural groups across items in the subsets of items or differences in perceptions within items. Given the limitation of space, a decision was made to provide a descriptive review of the results of responses to items across the items in subsets.

A major limitation of the preliminary report is the sample size and the lack of sufficient participants from the cultural groups of African Americans and Native Americans to include their responses in this preliminary report. The number of participants from these groups will be increased. The sample size was also currently too small to report stratified comparative results based on demographics e.g., level of online instruction experience, gender, age, primary language spoken in home, international student status.

The preliminary results indicate that there are patterns of differences observed among the items in the Likert surveys related to course design and pedagogical features. The observation on cultural differences also applies to the Likert survey pertaining to design principles. When the final report is compiled, the statistical significance of these observations will be determined. The Q-sort data on cultural differences among online learners from different cultural groups was subject to analysis and nine of the thirty-two design principles were found to be significant at the .05 level.

With a larger sample size, the topic of the cultural differences warrant attention in the creation of accommodations in the teaching process as well as the need for modifications in design. In some situations the observed cultural differences involve a difference between two cultural groups. Whereas, in other situations the differences may be limited to one cultural group. The substance of the observed difference must also be considered in determining if accommodations are warranted. Some accommodations may be developed and integrated into an online course by the instructor. Some may require the development of tools that the online learner and/or the instructor may employ to achieve the needed accommodation. Additionally, there may be needed accommodations that can be handled through information shared by the instructor. Further research will need to be conducted to facilitate decisions on needed accommodations.

The rate of growth in online instructional offerings, including online degrees, by most colleges and universities raises questions about the research base that currently informs decisions on display designs and instructional features employed in the presentation of courses. This is particularly true in insuring that cultural differences, among online learners from different cultural backgrounds are accommodated if they are found to impact learner outcomes.

The preliminary responses showed a trend in different culture groups responding to different design/pedagogy features. For example, Mid-Eastern participants consistently report a pattern of lower importance ratings on course design/pedagogy features than other cultural groups; Caucasian participants consistently reported a pattern of higher importance ratings on

course design feature/items than other cultural groups. Some features (e.g., “allow easy access to any part of the course” received the highest rating among all groups but Hispanic/Latino group. “Include self-correcting quizzes” feature which is most popular in online course, received the lowest rating from all cultural groups.

Future research considerations:

- In replicating this study consideration should be given to presenting the survey instruments in the native language of participants in addition to English.
- Continue to add collaborators to increase sample size.
- Research should be conducted involving the development and testing of online lessons that meet the preferences of respective cultural groups where preference differences have been validated.
- Research should be conducted on display principles that focus on the integration of text, audio and visual presentations of online instruction to determine if there are cultural differences that impact the preferences of students from different cultures.
- Consideration should be given to engaging students possessing proficiency in English but enrolled in online instruction developed and taught in their home countries. .

This study should be replicated at the secondary school level. Such research should consider the cultural backgrounds of domestic students and take into consideration the language spoken in the home. Individuals interested in becoming a collaborator of seeking additional information should contact Charlene Hu at 661-873-5389.