

# STUDENTS FROM DIVERSE CULTURES IN THE MULTICULTURAL ONLINE CLASSROOM: ISSUES AND SUGGESTIONS

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## ABSTRACT

Cultural diversity is an important element in education that should not be neglected, given that it can lead to subtle differences in the nature of classroom discussions, student and teacher expectations, and overall classroom etiquette, as well as the degree of acceptance of technology. This study was carried out at the Saudi Electronic University, an online tertiary institution, with a sample of 128 first-year and 142 fourth-year students together with 65 teachers. It focused on discovering students' satisfaction with how cultural diversity was addressed, as well as measuring teachers' awareness of cultural diversity issues at the University. The findings indicated a lack of satisfaction among students with how cultural diversity was addressed, and that teachers did not have sufficient experience with issues of cultural diversity in the online classroom. The study concluded with a discussion of appropriate strategies for addressing cultural diversity in the online classroom, in addition to some design strategies for multicultural online courses through using computer-supported collaborative learning environments and social network learning communities. Hence, this study might help in creating online classrooms for all through using strategies like these to overcome students' cultural diversity.

**Keywords:** *Culture, Cultural Diversity, Multicultural Classroom, Cultural Adaptation, Cultural Context.*

## 1. INTRODUCTION

Instructional Design is a field that involves communication, presentation, pedagogy and technology. Because these elements themselves are constantly changing, so, too, is Instructional Design (ID). Designers must stay abreast of new technologies that assist in learning and design, new pedagogical frameworks and applications, and the ever-changing forms of communication and the manner in which they are presented. Yet, one element of ID that is commonly overlooked is culture. Every classroom, whether physical or virtual, has its own cultural dynamic. Even within a physical classroom containing only local students of the same backgrounds, ages, and socioeconomic levels, cultural divides can exist [2][4][13][18]. Educational professionals, teachers and designers owe it to their students to create a classroom that is fair, respectful and inclusive. But, how? This responsibility becomes even more complex in a

multicultural online classroom in which students from various nationalities, ethnicities and cultures are presented with learning objectives and tasks in the same way [5].

One way to address the issue of culture in the multicultural online classroom is to strive for a culture-neutral presentation of material. This would involve, first, identifying cultural material. It could be argued that, for some subjects such as law or business administration, culture is inextricably bound to the material itself, and that teaching the material outside of its cultural context would result in incomplete instruction. Another aspect of culture-neutral presentation would be a neutral expectation with regards to student participation on the part of the instructor [29]. In other words, not all cultures value student participation and discussion in the same way that the western culture does and, moreover, some cultures frown upon it,

considering it disrespectful and inappropriate. Furthermore, there is the question of who is responsible for creating this cultural neutrality: the instructional designer, the instructor, or both? Regardless of the answer, there is also the problem of cultural awareness: an essential pedagogical facet in which both instructors and designers might lack proficiency and experience.

Another approach toward creating a multicultural online class is to design for diversity. That is, rather than suppressing cultural differences, the better solution is to include those cultures represented by students in the classroom. This leads others to believe that the onus should be on the students themselves to collect their own examples relative to their cultures to share with the class. In contrast, this would require much mediation by the instructor and a willingness to participate in classroom content on the part of students who might not be comfortable in such a role.

Previous studies have focused on the presence of cultural diversity among students in the classroom, but the present study looks at the extent to which teachers possess sufficient awareness of this cultural diversity and whether they have sufficient experience to design learning for all so that it serves all students despite their cultural diversity. In addition, this study will help us to know the role of educational institutions in addressing students' cultural diversity, especially in online classrooms.

## 2. THEORETICAL FRAMEWORK

Globalization has changed how business is conducted, how technology is used, and how information is shared. As the demand for higher education on a global scale increases and teaching in and designing for multicultural classrooms becomes more common, globalization and the types of distance learning that are being offered must be considered [1][31]. According to [26], globalization is “a phenomenon in which rapid advancements in information and communication technologies have led to dynamic, real-time communication across different time zones, the

breaking down of barriers so that global trade may prosper as well as increasing diversity as waves of people cross borders to seek opportunities in different lands” ([1], p. 68). Globalization can be seen on a smaller scale in the online classroom, where opportunities that arise from foreign education are sought from home and where students engage in real-time communication across different time zones and with varying degrees of understanding and proficiency in the predominant language and culture (i.e., the culture which is most represented in a particular classroom). In the case of American designers and educators, there is no question of English being the lingua franca. But, how aware are the designers and instructors of the influence that their own culture has on the classroom? Among others, [20] have asserted that cultural values are so intrinsic that they are inseparable from the learning process. However, [25] warn that exclusive use of the prevalent culture should be avoided due to the high level of diversity in online education. While globalization has blurred some of our borders, cultures nonetheless remain distinct. Therefore, a solution is needed to deal with culture fairly, especially in the classroom setting.

Noting cultural differences while in the classroom is a much easier task than anticipating them beforehand. The most widely-used and accepted framework in the area of classroom cultural issues is Geert Hofstede's (1986) [11] cultural dimensions theory. Originally a four-dimensional culture model, this theory measures the following: power distance (PDI); individualism-collectivism (IDV); uncertainty avoidance (UAI); and masculinity-femininity (MAS) (Liu et al., 2010). Hofstede defines these categories as follows: power distance (PDI) is the degree to which power and wealth are unequally distributed (high PDI); individualism-collectivism (IDV) is the degree to which the members of a society tend to act more as individuals or more as members of a group; uncertainty avoidance (UAI) is the degree to which members of a culture feel threatened by, and therefore, avoid unknown situations and unstructured ideas; and masculinity-femininity (MAS) is the degree to which a society adopts distinct gender roles [12].

It is clear to see that these differences in society can be easily translated into the classroom setting. According to Hofstede's (1986) theory [11], students coming from a culture of high PDI and high UAI would probably feel uncomfortable or even rude for questioning a teacher's position or arguing against a classmate's assertion, whereas a student from a low PDI and low UAI culture would probably feel bored or disengaged without those same classroom interactions. This is an example of the disparity that can exist among classmates in a multicultural online class. This problem is compounded by the designer's and instructor's own cultural leanings. Several of Hofstede's contemporaries also insist on the importance of the link between culture and educational design and delivery. [32] argued that the design of educational technical tools should take into consideration the learners' social and cultural contexts [35]. Mitter agreed that, in the transfer of knowledge within groups, culture must be taken into account. With Hofstede's cultural distribution framework in mind, and an appreciation of the significance of culture in the classroom, educators and instructional designers can create a more inclusive curriculum and environment [17].

Culture impacts the classroom because it is an inextricable feature of the student, the teacher and the designer. The United States military conducts its own cultural training for military personnel who will be deployed, work on missions, or serve internationally in other work-related assignments. The military recognizes the need of its service members not only to communicate but also to understand the cultures in which they will serve. For these purposes, they have created Culturally Aware Tutoring Systems (CATS) to prepare those who will serve abroad. The research conducted on these CATS supports the idea that culture impacts how learners acquire new material, that cultural awareness minimizes intercultural misunderstandings, and that culture brings flexibility to these systems [35]. The CATS examined in Young's study were designed through inclusion of several cultural elements, including anthropological, psychological, and even scientific. The developers collected their data for these

systems in a process that was monitored and evaluated by both ethnographers and anthropologists, and they included supplemental and alternative materials to support all learners. Young suggests that, if the processes and technology in place for CATS were brought into the public sphere, that the needs of all learners could be met [35].

One element of culture that is often overlooked in many fields, including education, is technology acceptance. In their study in a developing Caribbean nation, Dystart-Gale and colleagues explored how technology does not necessarily eliminate cultural barriers, especially if it is incompatible with in-place work practices or cultural values. They used E. M. Rogers's diffusion [23] of innovation theory to categorize rates of acceptance of technology, which include: "venturesome" (innovators), "respectable" (early adopters), "deliberate" (early majority), "skeptical" (late majority), and "traditional" (laggards). Rogers made several generalizations about these categorizations, including that the "early adopters" are of a higher social status, have a better education, and enjoy greater social mobility than the "late adopters". From this framework, and from their study, Dystart-Gale and colleagues offer the field of Instructional Design a valuable reminder: "the relationship between communication, culture and technology is complex: communication patterns are determined by culture and altered by technology, and culture exercises influence over the adoption of technology, only to be altered by technological change" ([7], p.43). In designing for the multicultural online classroom, designers must remain cognizant of the varying degrees of technology acceptance they are designing for in an effort to create a fair and welcoming online environment.

Across any two cultures there are at least subtle differences in the nature of class discussions, student and teacher expectations, and overall classroom etiquette. There are also very marked differences in the generalized educational styles between eastern and western approaches which must be considered in the design of a multicultural

course. Eastern education has very clear parameters surrounding authority in the classroom. The eastern classroom is predominantly teacher-dominated, has a centrally organized pedagogical structure, and involves a one-way, lecture-based delivery. Classroom activities and interactions are group-based, learning is mostly memorization-focused, and evaluation is exam-based [16]. Quite conversely, the western approach, particularly that of the United States, is more interactive among teacher and students as well as students and their classmates, encourages open discussion and disagreement, and is application-based and process-oriented. This polarity in educational approaches can pose serious problems for both learners and educators in the multicultural online classroom. The difference in education and in cultural communication patterns increases miscommunication [16]. In the case of this particular study, Liu and colleagues found that minority students (i.e., those not part of the majority, or prevalent, culture) sometimes felt that class material, which was presented in the case-based western style, was not pertinent to their own environments. They were often put off by the non-linear format of western classes. Furthermore, they were sometimes reluctant to question the instructor, or challenge their classmates, for fear of being rude or disrespectful. This lack of interaction in a eastern classroom can have a negative impact on student grades, as instructors expect, and often require, participation in discussions.

Non-native students in multicultural online classrooms can face other unforeseen difficulties due to course design, particularly in the case of remote and minority students. In fact, what might even appear to be minute details in online multicultural design can carry great cultural significance. According to prior research, the interface design should work in accordance with how the target culture will respond to the layout of the graphical interface, images, symbols, colors, and sounds [8] [10] [14] [34]. In a survey of instructional design and technology ( IDT ) instructors, designers, and students, Kinuthia asked about the current trends in addressing sociocultural content in IDT coursework. What was found was

that many instructors and designers lacked experience outside of their own academic culture. While education may be considered a profession that is somewhat cosmopolitan in nature, as educators often study, research, or present abroad, that was not always the case. Furthermore, designers in many programs were not required to take cultural awareness or international studies classes, and even where those classes were offered as electives, some designers chose not to take them because they either preferred another elective or thought that the classes offered did not provide a sufficient level of expertise in their subject [14]. This is a clear shortcoming on the part of program designers because, as Kinuthia pointed out, learners are more responsive to instructors and instructional designers when the material and concepts presented to them are adapted to their own personal situations. Culturally inclusive design and material also create a more authentic classroom experience for non-native students, who can actually apply the knowledge they have acquired in their home environments [14].

The studies previously discussed demonstrate that instructional designer must take many factors into consideration to create a course that is fair to all students, but an inclusive design goes beyond creation and extends into sustained student support. Richie and colleagues [22] list the four basic roles of the instructional designer as: analyst; evaluator; e-learning specialist; and project manager. In all of these roles, the instructional designer is in a position to support the online experience for non-native speakers. In a study of the quality of two online environments, one in Canada and one in Spain, yet more cultural influences were found to impact the online classroom. In Spain, instructors themselves also serve as instructional designers, whereas in Canada, the Instructional Design field is autonomous. This, in and of itself, has cultural implications: it could be suggested that, in Spain, the instructor holds more authority than in Canada or that the Spanish culture has a higher PDI than Canada does. Another finding in the study was that Canadian online courses focused much more on learner support strategies [27]. This could be due to several

reasons: culture, finances, training, or institutional practices. It could be that the Spanish institutions do not have these types of support services, or it could be that they do, but instructional designers are not aware of them [27]. In the case of the latter, it is the instructional designer's responsibility to know what is available for the students for whom he or she is creating lessons.

### 3. PURPOSE AND SIGNIFICANCE OF THE STUDY

There have been numerous studies that have sought to successfully integrate a multicultural learning environment in various multicultural learning contexts, including primary, secondary, higher education, the military, and the workplace. With all that can be done to equalize the design of the multicultural classroom, cultural adaptation should not operate in only one direction; all stakeholders should play a part in creating a fair and appropriate learning environment. Many of the studies discussing culture in the multicultural online classroom focus on the teacher and instructional designer's duty to, as Rogers et al. claimed, "quickly educate themselves on the cultural differences and the importance and impact those differences pose on the instructional design and delivery" [24][30].

Therefore, this study investigated the extent to which cultural diversity was addressed for students at the Saudi Electronic University and how satisfied they were with this, in addition to the teachers' awareness of their role, which should be to counter problems caused by cultural diversity among their students. The research study examined the following questions:

- How satisfied were students at the Saudi Electronic University about the learning strategies and tools used to accommodate their cultural diversity? Was there a difference between first year students and fourth year students?
- To what extent did teachers at the Saudi Electronic University possess sufficient awareness of cultural diversity among their students?

### 4. METHODOLOGY

This study used a quantitative method because the nature of the research questions required a quantitative tool for data collection. Also, because the results are numerical, they are considered more reliable and objective than those from qualitative methods. Quantitative data are collected rigorously. The questionnaire was employed as a data collection tool in order to explore students' satisfaction and teachers' awareness about addressing cultural diversity at Saudi Electronic University.

### 5. STUDY SAMPLE

The sample consisted of first-year and fourth-year students at the Saudi Electronic University, as well as teachers at the same University (see Table 1).

*Table 1. Frequency Distribution: Participants in the study*

Participants	Frequency
First-year students	128
Fourth-year students	142
Teachers	65

### 6. QUESTIONNAIRE DESIGN

In this study, there were two questionnaires. The first one was employed to measure students' satisfaction with how cultural diversity was addressed at Saudi Electronic University. This questionnaire was broken down into two sections. The first, demographic, section identified the student's year (first or fourth). The second section consisted of eight items measuring students' satisfaction with how cultural diversity was addressed. A five-point Likert scale, with "1" corresponding to "Never" and "5" corresponding to "Always", were used in this section.

The second questionnaire was employed to measure teachers' awareness of addressing cultural diversity at the University. This questionnaire had seven items using a five-point Likert scale, with "1" corresponding to "strongly disagree" and "5" corresponding to "strongly agree". The questionnaire was designed and adapted for online use through a survey website with a link shared with participants.

**7. VALIDITY AND RELIABILITY**

The questionnaires were checked for validity using content and face validity processes through sending them to three experts in instructional technology. The questionnaires were revised following their suggestions. Also, a pilot study was applied with 10 students and 5 teachers to measure reliability. Cronbach's alpha was calculated to measure the reliability of the questionnaires (see Table 2).

Table 2. Reliability of Questionnaires

Variables	N of Items	Cronbach's Alpha ( $\alpha$ )
Students' satisfaction with the learning strategies and tools used to accommodate their cultural diversity	8	0.81
Teachers' awareness of their students' cultural diversity	7	0.79

**8. RESULTS**

In this study, version 23.0 of the Statistical Package for the Social Sciences (SPSS) was used to give a descriptive analysis and to identify statistically significant differences between groups in the study. 128 first-year and 142 fourth-year students responded to the first questionnaire, and 65 teachers responded to the second questionnaire.

**8.1 Students' satisfaction with the Saudi Electronic University's interest in cultural diversity among students.**

The results indicate that students were not completely satisfied with how their cultural diversity is dealt with at the Saudi Electronic University. 80.01% of participants thought that the courses at the Saudi Electronic University did not take into account their cultural diversity (item 1). This is confirmed by item 2 which shows that 45.18% of the participants sometimes had difficulty understanding some words that were incompatible with their culture, in addition to 38.89% of the participants emphasizing that the examples used by teachers were focused on specific cultures (item 5), as well the absence of a facilitator on campus who could have a major role in helping students overcome the problems of cultural diversity (item 7).

Despite all these, the findings indicate that 71.47% of the participants did not have the desire to withdraw from the university because of cultural diversity issues (item 6), and this may be due to the effective role of cooperative work with their peers, which helped them to get to know other cultures (item 3) (see Table 3).

Table 3. Students' satisfaction with how cultural diversity issues are addressed at Saudi Electronic University.

Items	Always	Often	Sometimes	Rarely	Never
1. The courses at the Saudi Electronic University take into consideration the cultural diversity among students.	n=9 3.33%	n=15 5.55%	n=30 11.11%	n=158 58.52%	n=58 21.49%
	n=24 8.88%			n=216 80.01%	
2. It was difficult to understand some of the vocabulary words that do not fit my culture at the Saudi Electronic University.	n=35 12.97%	n=22 8.15%	n=122 n=45.18%	n= 65 24.07%	n=26 9.63%
	n=57 21.12%			n=91 33.7%	
3. The collaborative work with my colleagues helped me to overcome	n=44 16.30%	n=88 32.6%	n=75 27.77%	n=24 8.89%	n=39 14.44%

aspects of cultural diversity among students at the Saudi Electronic University.	n=132 48.9%			n=63 23.33%	
4. The teachers at the Saudi Electronic University have sufficient awareness about the cultural diversity among their students.	n=35 12.96%	n=23 8.52%	n=64 23.7%	n=83 30.74%	n=65 24.07%
	n=58 21.48%			n=148 54.81%	
5. The examples which were used by teachers focused on specific cultures.	n=48 17.78%	n=57 21.11%	n=91 33.70%	n=41 15.18%	n=33 12.22%
	n=105 38.89%			n=74 27.4%	
6. Because of the cultural bias among students, I tried to withdraw from the Saudi Electronic University.	n=17 6.30%	n=26 9.63%	n=34 12.60%	n=134 49.62%	n=59 21.85%
	n=43 15.93%			n=193 71.47%	
7. At the Saudi Electronic University there was a facilitator on campus to help students overcome cultural diversity among students.	n=8 2.96%	n=21 7.78%	n=53 19.63%	n=104 38.52%	n=84 31.11%
	n=29 10.74%			n=188 69.63%	
8. At the Saudi Electronic University there were asynchronous training courses that helped me to overcome the cultural differences between students.	n=31 11.48%	n=23 8.52%	n=76 28.15%	n=87 32.22%	n=53 19.63%
	n=54 20%			n=140 51.85%	

A Mann-Whitney U Test was used to test whether there were any significant differences between the two independent groups (first-year and fourth-year students) in their satisfaction with the Saudi Electronic University's interest in cultural diversity among students (see Table 4).

Table 4. Possible differences between first year students and fourth year students

Items	Mann-Whitney U	Sig
1. The courses at the Saudi Electronic University take into consideration the cultural diversity among students.	11776.074	0.036
2. It was difficult to understand some of the vocabulary words that do not fit my culture at the Saudi Electronic University.	12640.972	0.286
3. The collaborative work with my colleagues helped me to overcome the aspect of cultural diversity among students at the Saudi Electronic University.	12085.089	0.079
4. The teachers at the Saudi Electronic University have sufficient awareness about the cultural diversity among their students.	12393.069	0.178
5. The examples which were used by teachers focused on specific cultures.	12558.798	0.259
6. Because of the cultural bias among students, I tried to withdraw from the Saudi Electronic University.	12251.854	0.137
7. At the Saudi Electronic University there was a facilitator on campus to help students overcome cultural diversity among students.	12547.404	0.252
8. At the Saudi Electronic University there were asynchronous training courses that have helped me to overcome the cultural difference between students.	12835.703	0.427

The results in Table 4 show there were significant differences between the two independent groups (i.e. first-year and fourth-year students) on only one of the dependent variables: The courses at the Saudi Electronic University take into consideration the cultural diversity among students (item 1). Descriptive Statistics on SPSS showed that 69% of participants who selected “Rarely” or “Never” on item 1 (The courses at the Saudi Electronic University take into consideration the cultural diversity among students.) were first-year students

while only 31% were fourth-year students, indicating that cultural differences were a particular problem to students new to the University. This may be because fourth-year students benefited from learning in a real-life environment through interaction with their peers, which has greatly helped them to overcome some of the problems of cultural diversity among students. This is consistent with Smith & Ragan' suggestion that "Learning is an active process in which meaning is developed on the basis of experience" ([28], p.19).

### 8.2 Teachers' awareness about addressing cultural diversity at Saudi Electronic University

Table 5. Teachers' awareness about addressing cultural diversity at Saudi Electronic University

Items	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. I have taken many courses that qualify me to take into account cultural diversity in educational design.	N=5 7.69%	N=11 16.92%	N=23 35.38%	N=18 27.69%	N=8 12.31%
	N=16 24.61%			N=26 40%	
2. When students are from the same region, I do not care about the cultural component.	N=22 33.85%	N=19 29.23%	N=10 15.38%	N=8 12.31%	N=6 9.23%
	N=41 63.08%			N=14 21.54%	
3. It is difficult to establish a fair and comprehensive course for cultural diversity.	N=13 20%	N=11 16.92%	N=21 32.31%	N=11 16.92%	N=9 13.85%
	N=24 36.92%			N=20 30.77%	
4. With the current technological development, I believe that cultural diversity among students has decreased to a degree that should not be focused on during course design.	N=17 26.15%	N=21 32.31%	N=13 20%	N=6 9.23%	N=8 12.31%
	N=38 58.46%			N=14 21.54%	
5. Before the start of a course, I make clear to all students the policy used in discussions during the educational process.	N=13 20%	N=12 18.46%	N=19 29.23%	N=10 15.38%	N=11 16.92%
	N=25 38.46%			N=21 32.3%	
6. The increased focus on cultural diversity increases the fine details in design that have a negative impact on the educational process.	N=18 27.69%	N=21 32.31%	N=14 21.54%	N=8 12.31%	N=4 6.15%
	N=39 60%			N=12 18.46%	
7. The task of a comprehensive design for multiple cultures is limited to the educational designer, and the teacher has no role in this.	N=16 24.61%	N=24 36.92%	N=14 21.54%	N=9 13.85%	N=2 3.08%
	N=40 61.53%			N=11 16.93%	



As shown in Table 5, 60% of the teachers participating in the study believed that an increased focus on cultural diversity in the online course would increase the details required in the design, thereby having a negative role in the educational process (item 6); this may be because 40% of these teachers did not have sufficient experience about cultural diversity in the online classroom (item 1). In addition, 61.53% of the respondents believed that it is the educational designer who should be concerned with addressing cultural diversity among students, not the teacher (item 7). Furthermore, 58.46% of the participants believed that the current technological development is enough to overcome cultural differences between students (item 4). This is confirmed by the finding that 63.08% of the teachers participating in the study did not take into account cultural diversity when their students were from the same region (item 2), and this could lead to ignoring a number of cultural differences between students of the same region, such as acceptance of technology.

## 9. DISCUSSION AND IMPLICATIONS

The findings of this study indicate that 61.53% of the teachers participating in the study believed that it is the educational designer who should be concerned with addressing cultural diversity among students, not the teacher. I suggest that this leads teachers to relinquish their important role in this cultural aspect. With all that can be done to promote equality in the design of the multicultural classroom, cultural adaptation should not operate in only one direction; all stakeholders should play a part in creating a fair and appropriate learning environment. Many of the studies discussing culture in the multicultural online classroom focus on the instructional designer's duty to, as Rogers et al. [24] claimed, "quickly educate themselves on the cultural differences and the importance and impact those differences pose on the instructional design and delivery" (as cited in [30], p.462). There is also substantial discussion on the instructor's role in mediating potentially uncomfortable conflicts and misunderstandings that can arise in the multicultural classroom. However, what has received little attention is the role of the non-native student in this situation. While it is accepted that all students in a classroom deserve (and pay for) an equal education, is it realistic to expect designers and instructors to be aware of

cultural intimacies that might be offensive or off-putting? Furthermore, at least in the development stage, the student demographic for a given course is not always known. Courses can be developed and used semester after semester, year after year, without the designer having any notion of who, ultimately, will be using the design.

69.63% (n=188) of the students participating in the study confirmed that there was not a facilitator on campus to help students overcome cultural diversity. In situations where a large number of non-native speakers from the same culture will be taking a remote online course, one remedy might be to have an "on-campus facilitator" and to include a "face-to-face induction day" as was done in a study involving the preparation of American pre-service teachers for their teaching abroad experience in Northern Ireland [19]. The on-campus facilitator, familiar with both cultures, served as a liaison for students and their teachers abroad. In a generalized setting, this would be someone who had experience living and/or studying in both cultures and was fluent in both the local language and the language in which the course is delivered. The equally important "face-to-face induction day" gave students a chance to meet with their instructors online individually before the remote online class had begun and gave them the sense that they could rely on this support throughout the term [19]. While time constraints due to time zone differences might make sustained face-to-face support throughout the term impractical for most online classes, the "face-to-face induction day" would serve as an opportunity for teachers and instructional designers to assess the linguistic proficiency of the students and to provide information of any support available to them. It would also allow students to voice any concerns of their own regarding cultural differences, learning styles, or linguistic limitations.

Also, 45.18% of the participating students confirmed that they sometimes had difficulty with understanding some of the vocabulary that do not fit their own culture at the Saudi Electronic University. Although 38.46% of teachers said that they provided students with the policy used in discussions during the educational process, teachers should also provide lists of terminology particular to the course that non-native speakers might find useful in their understanding of course material. In addition, one method of reducing complications posed by linguistic limitations and timing issues is

to construct a course that carefully balances synchronous and asynchronous activities and interactions. Some non-native students enjoy synchronous discussion because it gives them practice in dealing with the language in real-time, and it allows them to get to know their peers in an unrehearsed setting [16]. Furthermore, non-native students can have difficulty in understanding new or multiple accents, or encountering unfamiliar idioms and terminology [16]. They can prefer the asynchronous portions of the course because they have the time to review material repeatedly, to look up any new words or terminology, and to carefully prepare their own contributions and responses .

Collaborative work with colleagues helped 48.9% of students participating in this study to overcome problems with cultural diversity. This means that regardless of who is responsible for creating cultural neutrality in multicultural online classroom – the instructional designer, the teachers, or both – some strategies may play a significant role in overcoming cultural differences in the multicultural online classroom. One of basic principles of constructivist design theory is that "learning results from an exploration of multiple perspectives" ([21], p.130). This creates a social learning environment in which knowledge is formulated and interpreted from several perspectives, and which in turn may lead to discovering, understanding, and converging different cultures. Rich learning environments have an important role in providing and showing multiple perspectives, especially, in the online classroom. Richey et al. [21] mentioned, "not surprisingly, many of the rich learning environments are networked, allowing full access to what has been called (knowledge webs)" (p.133). Also, collaborative learning environments could address different cultures in online classrooms through creating an interactive environment in which students can use their peers to explain some of the ambiguities that may be unknown to some cultures, especially if appropriate technology is used. Yingqin [33] reported that, " [culture] has been found as an important factor in affecting the collaborative process and, directly or indirectly, the learning and emotional outcomes in CSCL" (p.187). Therefore, teachers or instructional designers in online classrooms should focus on applying computer-supported collaborative learning environments (CSCL), as well as social network learning communities (Richey et al., 2011; Kumi-Yeboah, 2018). Yingqin also asserted that "a

substantial amount of empirical evidence has demonstrated that CSCL tends to yield more desirable learning outcomes than non-technology-enabled collaborative learning" ([33],(p.92).

On the other hand, students should be in touch with the outside society; they should have sufficient awareness of existing cultural differences and how to deal with them. Gu, Wang and Mason reported that "cultural factors in joint activity are necessary in the age of globalization, in which demands are high for complex social engagement in various learning and performance settings" ([9], p.62). Social networks have a significant role to play in reducing the cultural gap among students. In a study carried out by Aljaad [3] with 500 female students at the College of Education in King Saud University, the study found that 61% of participants recognized the important role of social networks in spreading culture. Also, Bozkurt and Akbulut mentioned that "considering the global nature of MOOCs and other similar online networked learning practices that are global, multiple entry points can be provided for a culturally-diverse learner population" ([6], p.50). Thus, they should be properly employed in the multicultural online classroom in order to overcome cultural differences.

## 10. CONCLUSION

Students are often faced with challenges in the multicultural online classroom that go beyond cultural values, and designers and instructors can provide options and support to ease them through these challenges. Students can be affected by an online course's interface design, and the language and terminology used both in the interface and in content delivery. The designer should remain cognizant of the impact that the graphical interface, images, symbols, colors, and sounds that they incorporate into the online class can have on students.

Although 61.53% of the teachers participating in the study believed that the educational designer should be concerned with addressing cultural diversity among students, both instructional designers and teachers must work to make students aware of any support services that are available to them. Providing these students with textbooks and classroom discussion terminology

beforehand can also help non-native students to better prepare for language and material which might be completely new to them. If at all possible, having an on-site facilitator can also be of great assistance to these students and can guide them toward success. This was not found in the Saudi Electronic University, and this, in turn, may have led to students' dissatisfaction with how cultural diversity issues are addressed at Saudi Electronic University.

Finally, one simple addition that instructional designers and educators can make to their multicultural online classes is to make students aware of expected performance and behaviors. If class discussion will be expected of students and will have a bearing on the evaluation of their performance, the students should be made aware of this. They should also be given an overview of the home classroom culture and academic policies that might affect them. With this, students will have a better understanding both of the parameters of classroom discussions and interactions and of academic misconduct, such as plagiarism, which might pose serious consequences for them.

In investigating the multicultural online classroom and the roles of the designer, instructor and students in creating a fair and welcoming environment, one recurring theme is clear: all stakeholders must participate. An attitude of flexibility and inclusivity must be present in all stages of development and presentation and must be adopted by all participants. Through collaborative efforts, the multicultural online classroom can have benefits that exceed those of the conventional classroom.

## 11. LIMITATIONS AND FUTURE RESEARCH

This study has only looked at on students at the Saudi Electronic University, so further studies could address cultural diversity in online learning platforms which have a larger number of students from a wider range of different cultures, such as Edmodo and MOOCs. Also, this study focused on first-year and fourth-year students but

further studies could be extended to students from a wider variety of academic levels at the university. This wider sampling would give more comprehensive results that would be more generalizable. Also, future studies could focus on instructional designers in order to produce more neutral design strategies that fit all cultures.

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