A Qualitative Examination of an Interactive Computer Program on Multiculturalism

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Abstract

The use of interactive technology is entering instructional domains that have never before considered the use of advanced technology. One of these domains is the area of multicultural education, or diversity training. In the past two years, three different hypermedia programs have been developed to use on college campuses for diversity training. Two of the programs, developed at Miami of Ohio and Vanderbilt, utilize laserdiscs to present information and case studies for practiced decision making (Wilson, 1994). The third program was developed by the researcher at the University of Virginia and is the subject of this preliminary study.

Keywords — multicultural education, diversity training, interactive technologies, hypermedia.

1. Background

1.1. Multicultural education

Multiculturalism is the state in which one has mastered the knowledge and developed the skills necessary to feel comfortable and communicate effectively with people of any culture, and in any situation involving a group of people of diverse cultural backgrounds (Pusch, 1979). Multicultural education is the process of integrating the viewpoints of many cultures into the educational process. Multicultural education (also referred to as diversity training) also takes the role of helping individuals in the university community (students, staff, and faculty) to increase their ability to communicate and work with people from many cultures.

There are three basic components to diversity training (Lee, 1983). First, the training must be structured and the learning process organized. Second, the information should introduce new subjects and be presented in new, imaginative ways. Third, the training should also emphasize human interaction. Many other multicultural educators agree that the third component of interaction can have the greatest impact on training.

Diversity training also needs to show students how to apply the knowledge and increased awareness they have obtained. Strategies for this part of training can either be individualistic, or group-oriented. Students can acquire cultural knowledge from a variety of sources. Much of the training revolves under individualized instruction, including self-study, audio-visual presentations, and lectures (Sue, 1991). On the other end of the discussion spectrum, students can put into practice their new knowledge base by participating in role plays, simulations, and conflict resolution (Brown, 1985; Junn, 1994).

1.2. Hypermedia's relationship to multicultural education

Lee's (1983) three guidelines for designing effective multicultural training also blend with the features of hypermedia. First, the learning must be organized and structured. Although the order in which the information is accessed is within the control of the student, hypermedia is highly structured so users can access the correct information at the appropriate time. Second, multicultural information should be presented in new ways. Interactive media itself is unique learning tool to many students, but beyond that, each interaction with hypermedia can be new and different for the user. Finally, Lee emphasizes the need for interaction. Hypermedia requires the user to interact with the computer and the information. The learner can't sit passively and watch information cross the screen. The user must take action with the computer in order to gain information. Ridley (1994) also stresses the importance of interaction to forward the process multicultural education.

2. Methodology

2.1. Participants

Sixteen participants were solicited from an undergraduate education methods course and from student organizations and randomly assigned to one of two groups, eight students to each group: 1) Using the program with a partner (Paired Discussion or PD), or 2) using the program alone followed by a facilitated group discussion (Facilitated Discussion or FD).

2.2. Materials

The base of the research study revolves around the use of a computer program entitled "Managing Diversity" developed by the researcher. The program is interactive in nature and uses music, graphics, sound, text, case studies, games, and personal reflections to provide a framework for learning about multiculturalism. The learner can choose to explore Multicultural Theory, practice multicultural decision-making through Case Studies, or hear personal thoughts about the importance of multiculturalism from people who work in the field as part of the section entitled Personnel. The section on Multicultural Theory offers the learner additional choices such as learning about Cultural Differences, playing a game called Acrostics, learning how to Lead a Multicultural Group, or delving further in Multicultural Development. Throughout many of these sections, users are presented with the opportunity to react to what they are reading and hearing by typing in their responses and thoughts. The final section of the program takes the student a step further into making a commitment toward multiculturalism -- a multicultural contract. Learners can type in three things that they plan do during the next three months to promote multiculturalism.

2.3. Procedures

Students were randomly assigned to one of the two study groups The students in the PD group were told they could spend as much time as they wanted with the program and explore any part they wanted. The only requirement was they must agree as a team what to investigate and when to quit. The students working as individually with the computer in the FD group were also told to spend as much time as they wanted and stop whenever they wanted. This study group was also told that upon completion of the program, they would move to another room and participate in a 15-20 minute discussion. Students were observed while using the program and notes were taken on the parts of the program they used, as well as any discussions. Two trained multicultural facilitators were used for the FD. The facilitators raised issues of awareness (e.g. "How do you define racism?" and "what do you think about diversity at this university?"), and challenged students to accomplish developmental tasks (e.g., "Would you attend a party sponsored by students from

another culture?"). Finally, all student's were interviewed and audio-taped at the end of the study..

2.4. Data analysis

All information gathered was qualitative in nature. Data analysis was done by first transcribing the tapes from the post-instruction interviews. The transcripts of these interviews were examined by first comparing answers given by all participants to each question and grouping these responses within themes/categories. Observation notes were also examined and grouped into categories. Four categories or themes emerged from this analysis and they are presented below.

3. Results

3.1. Does the program help the understanding of multiculturalism?

The main goal of diversity training is to promote the understanding of multiculturalism and the importance of being multiculturally aware (Ridley et al, 1994). All students in the study reported that they felt the program and associated activities helped develop their understanding.

However, the FD students reported that most of their new understanding came from the discussion, rather than the use of the program itself. Participants felt that the facilitator was able to bring real-life situations to the topic. The following quote is representative:

> *The program helped you understand things*
> *but the discussion made it real, by talking*
> *about real people and situations.*

The PD students felt the program helped their understanding of multiculturalism through their partner. The program provided them with a great deal of information, and it was through the processing that information with a partner that understanding was enhanced. For some of the PD students, it was the individual differences between the two partners that increased understanding:

> *Multiculturalism focuses on knowing a lot*
> *about different cultures and understanding*
> *how different people perceive these cultures.*
> *You and your partner had different views,*
> *[so you can] see already why certain preju-*
> *dices exist. Like, I had different ideas...*
> *just like she did and I got input to her ideas*
> *and how she might see different things and*
> *she got that from me. So I guess it's good*
> *... to get two views on some of the topics*
> *[we] discussed on the computer.*

Other student felt that understanding was enhanced when paired with someone sharing similar beliefs. One woman reported:

...I had a partner who didn't think the same as I did, and I didn't know the boundaries. That's part of the problem with multiculturalism. You don't want to admit how racist you really are...or have someone discover the things that you hide. I wouldn't want to come to some self-realization with someone I didn't know right there.

Another student concurred with that thought. She had worked with someone similar and appreciated that they did not hold different belief structures:

[My partner] and I have basically the same beliefs about multiculturalism. It would have been difficult if one person was very open-minded and the other person was prejudiced, that wouldn't have worked.

Despite these comments, observations of both groups found that students of different backgrounds and cultures encourage better understanding of multiculturalism. On one occasion, a female student in a PD shared her experience at going to high school in a predominately Orthodox Jewish school. Within the FD, an African-American student was directly queried by the group about her experiences and thoughts. In general, it appeared that the important component that promoted understanding was the ability to interact with other persons, whether through PD or FD, about the information on the computer.

3.2. The discussions

As noted above, discussion was an important component to this learning experience on multiculturalism. The students in the FD reported that making the information real through discussion was important. Students felt that the facilitator provided alternative avenues to work with and interpret the information they gathered first individually.

I think I prefer the one-on-one with the computer first, and then broaden the information with a discussion, or interaction about it.

Like I told [the facilitator], it was nice to be able to see it by yourself the first time.

However, one FD student indicated that she had instituted a partnership with another student who was also working alone on the computer.

I found myself discussing things with the girl on my right because I knew her. I think that helped [me process the information].

Although only one student reported in the interview that she had discussed information with others, it was observed that most of the students working alone interacted with others sitting nearby at several points during their time on the computer. Sometimes these interactions were to find help with the mouse or how to navigate the program. More often, the FD students shared information with each other about the program. Students were overheard telling others about some "neat music" they had just found, or giving pointers on the game. Two students compared responses on one of the case studies.

The PD students for the most part felt that the discussion with their partner was important to their experience.

...Before, I went to a school that was forty percent Jewish and I was really interested to see what [the program] said about Jewish people and then I shared my experience [with my partner].

We were very analytical about a lot of things. We talked about personal experiences.

We talked about whatever came on the screen, sometimes we laughed about things.

I think if people want to discuss it's better to do it [during the program use] instead of waiting, while you've got everything right there in your mind...

This last quote shows one of the main differences between the FD and PD discussion. The discussions with the PD group was more frequent and spontaneous. Discussions were continuous and took on an air of encouragement. One partner would encourage the other to type in a response to a question, or to manipulate the mouse for a time. No pair held the same type of discussion as another pair. PD students felt comfortable at seemingly going off the topic for a time, but always managed to bring themselves back, and actually added to the conversation.

In contrast, for the FD group, the facilitator spoke at least half of the time. Students would eventually chime in with their thoughts and reactions when prompted, but not initiate a conversational thread. FD students seemed more conscious of directing their comments directly to the topic of multiculturalism and the facilitator.

Generally, all students seemed to value the opportunity to engage in a discussion related to multiculturalism either during the interaction with the computer or after. As shown, even those students who were not placed with a partner self-initiated a partnership during use of the computer to aid understanding of both the computer and the content.

3.3. Interaction with the computer

One of the most exciting aspects of the study was to observe the students interact with a computer. Several of the students were visibly dismayed to discover that their exploration of multiculturalism involved the use of a computer.

*When I walked in the door, I looked at her
and said "Oh no, this isn't a computer thing
is it? I hate computers...*

Other students had difficulty using the mouse at the beginning and general difficulties using a computer. However, usually within five minutes, students in the PD group appeared to have overcome these problems and were energetically pushing forward. The same student who was dismayed at first, ultimately found the program enjoyable:

*When I got going I thought, "Wow, this is
fun." I've used computers to type papers...I
really do not work well with computers.
But I really enjoyed this program. It was
very easy to follow. And it was interesting.*

Some students expressed satisfaction with the variety that the program could provide:

*I liked the voices on the screen. That really
added to the program a lot. I liked the
quotes, like Martin Luther King and others.*

*There was some stuff that was really getting
you to think about situations and there was
some stuff that was just educational, ...
there was enough balance that kept me in-
terested to go on and see what the next box
was like.*

The PD students were able to use their partner to find more information. Partners were observed encouraging one another to go further and explore more. Many times, a partner would notice a button that the other person hadn't, and the pair would decide to investigate. On several occasions, one partner would start to lose interest and be ready to quit, but the enthusiasm of the other person would reinspire him/her to continue. Additionally, students who weren't comfortable with the computers were able to rely on their partners to help them along the way. When the program allowed the user to type in a response, PD students were more likely to add their thoughts.

In contrast to the PD, it was observed that if a person working alone was not comfortable with the computer, s/he did not investigate all sections of the program. Two FD students had difficulty moving the mouse. Therefore, they chose buttons and menus near the original mouse position. Only a couple FD students added comments when prompted. The other students in the FD treatment either did not find the comment boxes, or could not figure out how to type into the boxes.

4. Discussion

Multicultural educators are in agreement that interaction is an important component of diversity training. The results of this study seem to support this notion. Students in each group both reported and were observed interacting with other individuals while using "Managing Diversity." Even though the FD students knew that they would be having an opportunity to talk about multiculturalism in their group, they still sought out other people for discussion. The conversations in the PD group focused more on sharing information and experiences about multiculturalism, while the interaction during computer use for the FD students seemed to be more of encouragement with the computer. Discussion also seemed to serve the purpose of drawing the information together. They first saw the information on the computer screen, and then pulled the bits and pieces together in the discussion, either formally or informally.

Diversity training must also be new and challenging. The use of hypermedia seemed to fill that role for these students. Students reported that the program helped their understanding of multiculturalism, and the discussion furthered understanding. The program also offered surprising features they hadn't expected. The special abilities of hypermedia to include sound, graphics, and music provided an excitement at interacting with the information.

5. Implications for Future Research

The results of this study indicate a need for further study on the use of interactive media in multicultural training. Students reported that discussion was important for increased awareness, more quantitative measures would be necessary to determine if the perceived increase took place. This study explored the use of more traditional facilitated discussion following the use of the program. Future exploration could study how the use of the program by a facilitator during a discussion affects knowledge and awareness.

Finally, this study did not separate the students' individual use of the computer from the facilitated discussion. It is possible that students gained quantita-

tively and qualitatively as much from just using the program, and the following discussion didn't really add increased awareness and knowledge. Through more inquiry into this topic, one can better understand the role interactive media can play in multicultural education.

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