Tolerance for Ambiguity as a Potential Barrier to Intercultural Interactions

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Abstract

Online teaching brings both unique challenges and opportunities to students and faculty (*e.g*, Prensky, 2009). Some of these challenges and opportunities are in the area of perceptions of online teaching itself (*e.g*, Osborne, Kriese, Tobey and Johnson, 2009a), some involve unrealistic expectations or lack of appropriate preparation on the part of students (*e.g*, Clark, 2010) and others involve the match between faculty teaching styles, student learning styles and digital instruction (*e.g*, Chen, Kinshuk, Wei & Liu, 2010; Sheng-Wen, Yu-Ruei, Gwo-Jen & Nian-Shing, 2011). These challenges might present particular difficulties when the goal is to change attitudes (*e.g*, Bolliger & Martindale, 2004). The current study assessed the relationships between Tolerance for Ambiguity (Budner, 1962; MacDonald, 1970; McClain, 1993), Munroe Multicultural Attitudes (Munroe & Pearson, 2006) and student performance in an online course on the Prejudice, Discrimination and Hatred. As hypothesized, changes in Tolerance for Ambiguity and Munroe Multicultural Attitudes across the semester were predictive of course grades.

Introduction

A historical foundation

We set out to design a course that would be process and not content driven. We wanted that process to result in attitudinal change that we felt would be relevant toward promoting change in the affective, behavioral and cognitive components of attitudes related to prejudice, discrimination and hatred (in particular, Tolerance for Ambiguity and Multicultural Attitudes – outlined below). We built our course to include a critical thought model (based on Blooms (1999) taxonomy) and to include the kind of higher-order "practice" Bloom and others (*e.g*, Banks, 1999) espouse.

Elsewhere, the authors have explored the issues of content vs. process driven courses and the promotion of honest, sincere and open self-reflection (*e.g*, Osborne, Baughn & Kriese, 2007). The authors of this work believe a well-designed, online course with individual and group assignments that was driven by a critical thought model (see Osborne, Kriese, Tobey & Johnson, 2009b) would prepare students for the kinds of discussions that would result in attitudinal change – not just changes in what students *say* things but also what students *believe*. We will suggest below that at least two of the qualities relevant to reducing prejudice, discrimination and hate are Tolerance for Ambiguity and Multicultural Attitudes. So, a course was designed that was based on the literature on best practices in online teaching (*e.g*, Osborne, Kriese, Tobey & Johnson, 2009a; 2009b) and literature on how to promote change that might result in a reduction in prejudice, discrimination and hate (*e.g*, Bennett, 1986; 1993; Osborne, Kriese & Davis, 2014).

Why online teaching?

Wickersham (2009) outlines *best practices* for online instructors. In this work, she outlines reminders for faculty that the measures necessary to "develop and teach quality online courses are considerably different compared to implementing conventional courses" (p. 279). These practices demonstrate that quality online teaching is NOT just a matter of teaching a course differently. The faculty member must approach, construct, implement and administer a course from a different intellectual framework. As Wickersham notes, "effective online course delivery requires more than repackaging existing traditional course content" (p. 279). If, as Wickersham (2009) and others suggest, learning in an online environment is different than a traditional or conventional classroom and, as Osborne, Kriese, Tobey & Johnson (2009a) suggest, student expectations for online classrooms differ from faculty expectations, a gap can be created that can interfere with student learning despite the quality of the content delivered (*e.g*, Carr-Chellman, 2006).

Some research suggests that online courses provide unique opportunities to enhance critical thinking skills, foster and enhance interpersonal skills, promote discussion of sensitive topics, and provide a "safer" platform for students to honestly share in comparison to traditional classrooms (*e.g*, Hammersley, 1998; Osborne, Baughn & Kriese, 2007; Osborne, Kriese, Tobey & Johnson, 2009b). This work calls for viewing online courses as unique opportunities to discuss issues that would be difficult to discuss in conventional classrooms and suggest that the "degree of separation" in such environments encourage students to be more willing to share opinions that might not be popular. As a result of these "opportunities," critical thinking and interpersonal skills are enhanced. These authors provide qualitative evidence (in the form of student self-report) for such notions.

What "attitude" to measure and how to measure it?

In the online course on which the current project is based, we faced what we perceived as a especially challenging dilemma. Not only did we wish to use an online teaching environment to discuss the sensitive issues of prejudice, discrimination and hate, but we also wished to design the course in such a way that Multicultural Attitudes would shift and students would become more tolerant of ambiguity. In other words, we wanted to do more than disseminate content and change *what* students say; we wanted to change *how* they think. To truly address issues of prejudice, discrimination and hate, we decided that it needed to be an "inside job." We wanted to get students to focus inward

instead of just looking for hatred in others. We wanted them to explore the biases, opinions and values they held that might serve as precursors to prejudice, discrimination and hate.

Concerted efforts have been made to understand the kind of thought processes needed to encourage more inclusive thinking about others (*e.g*, Bennett, 1986; 1993; Thomas & Butler, 2000). Bennett (1993) considers intercultural sensitivity to be developmental in nature. Others have argued that this developmental sequence will not occur without systematic and guided interactions requiring one to "practice" moving along that continuum (see Osborne & Kriese, 2011). If, as Bennett (1986; 1993) has suggested, Intercultural Sensitivity is *developmental* in nature, it stands to reason such sensitivity has attitudinal components (*e.g*, Van de Vijver, Fons, Breugelmans & Schalk-soekar, 2008). Social Psychologists have long argued that attitudes involve three components (Breckler, 1984; Breckler & Wiggins, 1989). These components are: (1) affective – involving likes and dislikes, (2) behavioral – tendencies to approach or to avoid, and (3) cognitive – which involve evaluative beliefs. If we were to promote the kind of attitudinal changes in the course we felt it would result in a reduction of prejudice, discrimination and hate, then, we needed some way to measure attitudinal components relevant to these variables.

Fortunately, we did not have to "start from scratch" in our efforts to develop a course that would promote such attitudinal change. We followed Munroe and Pearson's (2006, p. 821) advice when they suggested:

> Banks's transformative approach translates the taxonomy into components that mold an attitude, which are firmly established in cognitive thoughts, beliefs, perceived facts, and knowledge about the attitude object (know); the affective emotion felt toward the object, through either positive or negative evaluation (care); and the behavioral course of action regarding the object (act; Allport, 1979; Hammersley, 1998). The changing of attitudes occurs through the process of reinforcement, punishment, or imitation and association and is acquired by a constructivist approach whereby an individual is an active agent in constructing meaning to his or her life from such interactions (Berscheid, Snyder, & Omoto, 1989; Tripod, 2001).

The measure developed by Munroe and Pearson (2006) based on the above philosophy, yields three scores that map onto the components of an attitude: (1) know (cognitive), (2) care (affective), and (3) act (behavioral). As such, it was a "perfect fit" for our course. We believed we could measure these "Multicultural Attitudes" at the beginning and end of the semester and determine if our course had created an atmosphere that fostered change in those attitudes (Kagan, 1995).

Preparing for the shift

In recent work, Tapanes, Smith & White (2009), suggest that unanticipated cultural background issues (such as instructor ethnicity) that are not readily apparent in online courses can create barriers and discomfort for ambiguity intolerant students in comparison to ambiguity tolerant students. This, in combination with literature on Tolerance for Ambiguity itself (*e.g*, McClain, 1993) led us to include this measure in our study. Research on Tolerance for Ambiguity suggests this as a possible barrier (if tolerance is low) or facilitator (if tolerance is high) of such active "engagement" with the assignments that might then predict degree of multicultural attitude change as a result of the course (McClain, 1993; Tapanes, Smith & White, 2009). McClain's definition supports such a prediction, "Tolerance for Ambiguity is defined here as a range, from rejection to attraction, of reactions to stimuli perceived as unfamiliar, complex, dynamically uncertain, or subject to multiple conflicting interpretations." (McClain, 1993, p. 184).

Bringing it all together

Following the lead of Gokhale (1995), we decided that several of the assignments in the course needed to be collaborative in design in order to maximize the opportunities for critical thinking and "demand" that students confront (whether comfortably or not) the ambiguity that results in such situations. In combination with the realization that only by confronting difference could students begin to develop more "open" Multicultural Attitudes, we decided to measure Tolerance for Ambiguity (McClain, 1993) as a possible confound or predictor of scores on the multicultural attitude scale.

The study that results from this combination, then, assessed the following: (1) pre and post scores on the Munroe Multicultural Attitude Scale (and the Know, Care and Act subscales which map well onto the affective, behavioral and cognitive components of attitudes as outlined above), (2) pre and post scores on Tolerance for Ambiguity (measured via McClain's (1993) Mstat-I), and (3) performance (grades) in an online course on the Psychology of Prejudice, Discrimination and Hate. Scores on these measures were kept in a separate file by the teaching assistant for the course until student grades for each assignment and the course had been computed. We did this to minimize the likelihood that faculty awareness of student scores on these measures might influence the grades given on assignments and for the course.

Hypotheses

There are two main measures in this study – Tolerance for Ambiguity and Multicultural Attitudes. We compare these scores with student grades for the course.

For Tolerance for Ambiguity, we hypothesized that students who scored higher on the measure (those scoring as the most intolerant) when comparing pre and post scores, would receive lower grades in the course than those who scored as more tolerant.

For Multicultural Attitudes, we hypothesized: (i) higher scores on the Mstat-I – which would indicate more *inTolerance for Ambiguity* - would be correlated with lower scores on all three subscales (Know, Care, and Act) of the Munroe scale, and (ii) higher scores on the Munroe scale (indicating higher levels of the three components of Multicultural Attitudes) would be positively correlated with course grades.

Twenty-one students enrolled in an online course on Prejudice, Discrimination and Hate were asked to complete the Tolerance for Ambiguity scale (McClain, 1993) and the Munroe Multicultural Attitudes Scale (Munroe and Pearson, 2006) at the beginning of the semester and again at the end of the semester. Students were asked to post their responses and to reflect on their scores in the online Discussion Forum. For the first forum, they were given the following directions:

1) Introduce yourself to the class. Let us know who you are and get to know you.

2) Complete the Tolerance for Ambiguity scale attached to this forum.

3) Complete the Munroe Multicultural Attitudes scale attached to this forum.

4) For each of the scales, how did you score? What do you think your score means? For the Munroe Scale - be sure and reverse score the listed items and include all 3 Scores (Know, Care, Act) in your discussion forum post.

5) What do you think "Tolerance for Ambiguity" and "Multicultural Attitudes" have to do with Hate?

This was the first discussion forum for the course and was completed during week one of the semester.

This first completion of the tolerance and multicultural scales was followed by the completion of four individual assignments, four group assignments and six discussion forum weeks in which a current event related to the topics of prejudice, discrimination and hate was discussed. After these intervening assignments and discussions, then, students were asked to complete both measures again. The directions for the final discussion forum were:

We have 3 things we would like for you to do for this final forum:

1) complete the Munroe Multicultural Attitudes Scale (and post your scale separately for the "Know", "Care" and "Act" subscales)

2) Complete the Tolerance for Ambiguity Scale (and post your total score)

3) Address the following questions in your final course post:

a) Now that we have completed all of the assignments for the course, answer the following questions: (1) what individual assignment had the most impact on you? Why, (2) what group assignment had the most impact on you? Why?, (3) What is the most important thing you learned about yourself?, (4) What do you plan to do with this knowledge?

b) reflect on your scores on the 2 measures (remember you also took these at the beginning of the course). Have your views of yourself on these changed? Why or why not?

As can be seen from the descriptions of the assignments, the emphasis was placed on student reflection on their scores and how those scores might relate to the topics of the course. Student scores were placed into a spreadsheet and difference scores were calculated. For the Tolerance for Ambiguity measure, higher scores indicate a greater degree of *intolerance*. In this fashion, when end of semester scores are subtracted from beginning of semester scores, a negative number would indicate a decrease in intolerance. For the Munroe scale, higher numbers indicate a greater degree of self-professed knowledge of Multicultural Attitudes, caring about those attitudes and willingness to act on those attitudes. Again, we hypothesized: (1) that higher levels of *intolerance* would be negatively correlated with course grades (lower levels of intolerance would be associated with higher course grades), and (2) that change scores in Tolerance for Ambiguity (differences between pre and post scores) would be negatively correlated with change scores on the Know, Care and Act subscales of the Munroe Multicultural Attitudes Scale (lower levels of intolerance would be associated with higher levels of knowledge, caring and acting on Multicultural Attitudes).

Results

As a reminder, student scores on the Mstat-I and the Munroe scale were kept separate from faculty access to and grading of course assignments until the completion of the semester. The goal here was to see if scores on these measures were associated with course grades when faculty who were assigning those grades were unaware of those scores. Difference scores were computed between the initial Tolerance for Ambiguity score from week one of the semester and week 16 of the semester. A negative difference score would reflect a *decrease* in *intolerance* and a positive number would indicate an *increase* in intolerance. A frequency distribution was calculated for the Tolerance for Ambiguity difference scores so that students could be categorized as having increased in tolerance or decreased in tolerance across the semester. The score that split the distribution was -3. In other words, roughly half of the students in the class showed a decrease in intolerance of 3 points or fewer with many of these students showing an increase in intolerance (range = 25 to -32). This split was used to categorize students as low or high in intolerance change across the semester. A low score would reflect a low amount of decrease in intolerance or an increase and a high score would indicate a high amount of decrease in intolerance.

As expected, those students showing the least amount of decrease (or even an increase) in intolerance across the semester, earned lower grades in the course than those students who showed a significant decrease in intolerance, $t(1,19) = 4.659, p < .001$. The average course grade for those in the low decrease in intolerance group was a 3.2 (translating to about a C+) and the average course grade for those in the high decrease in intolerance group was a 4.9 (about an A-). Course grades were the culmination of grades across the 8 assignments and the 6 discussion forum postings by faculty unaware of student scores on the Tolerance for Ambiguity measure.

In terms of Multicultural Attitudes, changes in Knowledge and Caring subscale scores (across the semester) were positively correlated with course grades ($r = .485$ and $r = .475$, respectively for Know and Care subscale scores and course grades) but Act

scores did *not* correlate with course grades (*r* = .043). As expected, changes in multicultural attitude subscale scores (differences in beginning of semester and end of semester scores) were negatively correlated with change scores on the Tolerance for Ambiguity measure. Change in tolerance was negatively correlated with change in the Know subscale of Multicultural Attitudes (*r* = -.409, *p* = .06) and the Care subscale (*r* = -.348, *p* = .12). This means decreases in *intolerance* were associated with increases in the Know and Care subscale scores on the Munroe Multicultural Attitude Scale. Although neither of these correlations reaches significance, they are both in the expected direction. Change scores in Tolerance for Ambiguity and change scores on the Act subscale of Multicultural Attitudes were not correlated, *r* = -.067.

Discussion

It was the belief of the faculty teaching this online course on prejudice, discrimination and hate that Tolerance for Ambiguity and Multicultural Attitudes would be predictive of course performance. As outlined in the literature review above, this is based on an analysis of the background work on these measures and also the unique opportunities for self-analysis and safe discussion that can accompany online courses. The entire course used in this study is centered on learning to recognize and accept difference as something to be valued and not perceived as threatening. As such, it makes sense that student progress in confronting and accepting ambiguity (which would be reflected in decreasing *intolerance* scores) would be predictive of course grades. At the same time, the critical thought model employed in the course demands that students reflect inward and then outward in thinking about prejudice, discrimination and hate. This thought model maps nicely onto the Know, Care and Act subscales of the Munroe Multicultural Attitudes Scale so, again, it would make sense for changes in these scores from the beginning to the end of the semester to be predictive of course grades.

Students who demonstrated the most change in their Tolerance for Ambiguity (showed an increasing ability to tolerate ambiguity) earned the highest grades in the course. This is, especially, significant because faculty did not know student scores on this measure until after all assignments had been graded and course grades assigned. So, a categorical awareness of student ability to tolerate ambiguity is not driving grading. Student ability to tolerate ambiguity appears to affect the quality of what is submitted for grading.

As expected, student scores on the Know and Care subscales of the Multicultural Attitudes scale were associated with course grades. Students showing significant changes in these scales (showing the most change in awareness of and caring about multicultural issues) earned higher grades in the course than those who showed less change. Again, this is telling given that the faculty assigning grades had no knowledge of these scores until after grades had been computed. Somewhat surprisingly, scores on the Act subscale did *not* correlate with course grades, *r* = .043.

Although these findings do not tell us how or why Tolerance for Ambiguity and Mul-

ticultural Attitudes are related to performance in an online course on prejudice, discrimination and hate, they provide a first step in understanding these connections. The current study was undertaken in an attempt to document that an online course on such sensitive topics could be utilized to promote change (many students did show significant increases in their ability to tolerate ambiguity and in their knowledge of and caring about multicultural issues). We have no quantitative evidence to show that the online aspect of the course had anything to do with the aforementioned changes. Based on anecdotal evidence and the literature cited above, however, it is our belief that the qualities available in the online platform are more likely to provide the environment for such change than the traditional face-to-face classroom.

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