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Three Factors That Contribute to College Students' Acceptance and Tolerance of Diversity: Religiosity, Moral Reasoning and Attributional Complexity

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Three Factors that Contribute To College Students' Acceptance and Tolerance of Diversity: Religiosity, Moral Reasoning, and Attributional Complexity

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By
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Three Factors that Contribute to College Students’ Acceptance and Tolerance of Diversity:
Religiosity, Moral Reasoning, and Attributional Complexity.

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THREE FACTORS THAT CONTRIBUTE TO COLLEGE STUDENTS’ ACCEPTANCE AND TOLERANCE OF DIVERSITY: RELIGIOSITY, MORAL REASONING, AND ATTRIBUTIONAL COMPLEXITY.

The responsibilities of teachers today include not only teaching academics but often include teaching about acceptance, diversity, and societal values as well. This study proposes that several factors, which may be involved in this teacher role of acceptance and tolerance of diversity, are connected—including the teacher’s level of moral reasoning, attributional complexity, and religiosity. Subjects included 181 teacher education majors at Western Kentucky University. The subjects completed the Defining Issues Test, Attributional Complexity Scale, general diversity survey, and a measure of religiosity. Findings include a significant correlation between the level of attributional complexity and moral reasoning and attributional complexity as a significant factor in predicting the level of acceptance of diversity. The focus of further studies should include the possibility of attributional complexity as a mediating factor and the application and impact of these constructs in the classroom.
Introduction

Teachers in the United States face a wide variety of societal and professional pressures today. The responsibilities of teachers today include not only teaching academics but often include teaching about acceptance, diversity, societal values, citizenship, and responsibility as well. These extended requirements often leave teachers perplexed and unprepared when asked to teach both academic and value related topics to students from a variety of cultural backgrounds.

According to Zhang (2001), current research indicates a growing diversity among students, and these students have a wide variety of cultural rules, values, and expectations. These cultural differences in students require a change in instructional methods, classroom management, and most importantly a change in educators - that is, educators most often use their own cultural values or views as a reference point or standard when examining other cultures. In order to be successful in the multicultural classroom, teachers must be able to examine cultural differences from a variety of viewpoints.

Post secondary educational institutions have adapted education programs to include education about diversity and cultural values, and, typically, teacher education programs focus on acceptance of cultural diversity and individualized education planning to accommodate for cultural differences. For example, Kentucky's New Teacher Standards (revised May 1999), which is used as a guide for training new teachers in Kentucky, states that new teachers must be able to incorporate learning and assessment strategies that address cultural diversity, show sensitivity toward cultural differences, link learning with students' cultural backgrounds, and use multiple perspectives and viewpoints in
order to facilitate knowledge. Although these types of programs have led to increased levels of acceptance as regards cultural diversity among college students (Smith, Hornsby, & Kite, 2000), there are several unexplored factors in relation to the level of acceptance of cultural diversity among future teachers and their probable success in the multicultural classroom.

Factors, such as religion (religiosity and religious affiliation), level of moral reasoning, and level of attributional complexity have been linked to the everyday decision making process of people in a variety of situations and circumstances (Loe & Weeks, 2000; Bruggeman & Hart, 1996; Good & Cartwright, 1998; Lampe, 1994; Glover, 2001; Watson, 1990; Pope & Meyer, 1999; Stadler & Baron, 1998). This link among these variables leads to the assumption that these complex factors, such as attributional complexity, moral reasoning, and religiosity, would also affect teachers in daily decision making in the classroom, even decision making relative to cultural diversity.

As stated above, one of the main goals of teacher education programs is to increase future teachers’ tolerance, acceptance, and awareness of cultural diversity. Universities and other post-secondary educational institutions have attempted to increase future teachers’ tolerance, acceptance, and awareness of diversity through specific programming, such as classroom instruction or cultural diversity workshops. Given that reports of the success level of this type of programming are inconclusive, it is important to address other factors that may affect the level of acceptance of cultural diversity of future educators.
Variables, such as level of moral reasoning and attributional complexity, which typically play an important role in decision-making and cognition, may affect a person’s level of acceptance or tolerance for another culture. Another factor to consider is the possible impact of religion, and the relationship among all of the variables to one another. As the research will detail below, these factors are interconnected, and therefore may not relate only to acceptance of cultural diversity, but they may also be related to one another. The main purpose of this study is to review past research in relation to these areas and to provide and test hypotheses of how these areas relate to future teachers of the multicultural classroom and future post-secondary teacher education instruction regarding diversity.
Moral Reasoning

Moral reasoning is the basis for ethical behavior and consists of a person's ability to use reasoning to determine right from wrong and/or utilize social justice principles (Kohlberg, 1984). According to Kohlberg, moral reasoning represents structures of thought in terms of defining moral values and principles apart from the authority which holds these principles and apart from the subject's own identification with the authority. That is, an individual with high principled moral reasoning uses a set of ethical and justice principles without using the principles set forth by an authority figure or group and without coloring the situation with their own personal views about that authority figure or group. As subjects progress through the stages of moral reasoning, they increase their understanding of the concepts of justice and often reflect a greater capacity for empathy and perspective-taking. A great amount of research surrounding this area has depended upon Rest's Defining Issues Test (DIT) as a measure of principled moral reasoning (Rest, 1993). This measure of principled moral reasoning on the DIT is known as the P score. Areas of interest for this study in relation to moral reasoning include the performance of college students on the DIT, correlations of prejudice, and the role of religion.

The Defining Issues Test. As stated above, the Defining Issues Test is the instrument often used in assessing level of moral development and principled reasoning. The Defining Issues Test was developed by Rest and is based on Kohlberg's theory of moral development. Kohlberg (1984) describes three levels of moral reasoning: the Preconventional level (Stage 1 and Stage 2), the Conventional level (Stage 3 and Stage
and the Post-conventional level (Stage 5 and Stage 6). At the Preconventional level, the person perceives morality in an egocentric way; that is, the person uses morality as a way to serve his/her own needs and interests over the interests of other and society. At this stage, rules are observed and valued when they meet the immediate needs of the person (Chassey, 1999). People in the Conventional level are beginning to take the perspective of others in society and morality is used to maintain relationships and the social system. At the Post-conventional level, principled morality is used, in other words, people at this level choose to uphold societal laws and contracts if and only if these laws and contracts protect the rights of others and follow ethical principles. Also, an increased awareness of social justice and human rights is applied at this level of reasoning (Loe & Weeks, 2000).

Through much research, the DIT has been found to be a reliable and valid measure of moral reasoning (Loe & Weeks, 2000; Hendel, 1991; Rest, Narvaez, Thoma, & Bebeau, 2000; Redford & McPherson, 1995; Bruggeman & Hart, 1996). Although, as will be described, the Richards and Davison study (1992) questions the construct validity of the measure, overall, the DIT has accurately measured moral reasoning throughout the majority of the research.

College students and the DIT. Several studies have been conducted related to college students' performance on the DIT. The primary focus of the research detailed below involves the comparison of undergraduate college students' performance on the DIT, including both teacher education majors and non-teacher education majors.

Finger and Borduin (1992) measured the moral reasoning among 159 undergraduate college students using the DIT. The researchers collected ratings of parental control and
warmth through the Family Relationship Questionnaire, ratings of self-reported social interactions as measured by the Missouri Peer Relations Inventory, family SES, age, and grade level. Subjects also completed the DIT. The findings revealed that two factors were significant in predicting moral reasoning level. The majority of the variance was accounted for by years in college or educational level (13%), while the frequency of informal social interactions accounted for 5% of the variance. The other factors were not significant in predicting moral reasoning level of college students.

Jeffrey (1993) compared 124 accounting majors’ level of principled moral reasoning, as measured by the P score on the DIT, to the moral reasoning of 300 non-accounting business majors and liberal arts majors. Accounting majors had significantly higher P scores at both the entry-level classes (i.e., freshman/sophomore levels) and the exit level classes (i.e., senior level) than liberal arts and non-accounting business majors at the respective grade levels. Also senior students in each major had a higher level of moral development than students in the lower grade levels. Accounting majors had significantly higher principled reasoning when compared to the average level of principled reasoning of college students in general. The researchers cited accounting majors’ overall interest in moral and ethical reasoning as the probable reason for these findings based on the subjects’ selection of major and/or future career in accounting. Specifically, according to Jeffrey (1993), accountants are known as being ethical and moral and that is why students with a higher level of moral reasoning choose accounting as their major. The findings also lend support to accounting instruction that emphasizes ethical and moral behavior.
Loe and Weeks (2000) demonstrated improvement of moral reasoning among 113 college students through ethical instruction. A group of sales students participated in ethics training, which included a total of 37.5 hours of class time. Also, two full classes were devoted to real life ethical sales situations. The students completed the DIT before the course began and after the course concluded. After completing a pre- and posttest analysis, the researchers found a significant improvement of moral reasoning among the sales students, implicating the ethical classroom instruction as the probable cause for the increase in moral reasoning.

These results are consistent with the findings of Gorman and Duffy (1994), who looked at the impact of service experience or real life ethical training on the moral reasoning of 70 college students. Subjects were enrolled in one of two programs at the university. One program focused on the students' learning about their heritage and culture and participating in small discussion groups about famous philosophical and religious thinkers (Perspectives program). The other program provided students with the opportunity to combine fieldwork experience (10-12 hours per week doing charity type work in the Boston community) with the exploration or discussion of basic moral questions in relation to their field experience in an instructional setting (Pulse program). Both groups of participants were given the DIT before and after their respective programs.

The control group, subjects in the Perspectives program, did not demonstrate pre- and posttest differences. However, the subjects in the Pulse program performed significantly higher on the posttest DIT than on the pretest DIT, indicating an increase in moral reasoning and probable cause for further support of ethical instruction to increase moral
reasoning in college students. However, it should be noted that students who volunteered for the Pulse program, like the accounting students in the Jeffrey (1993) study, demonstrated a significantly higher beginning P score or principled moral reasoning level than the did students who volunteered for the Perspectives program. This finding lends support to the theory that college students choose courses or majors that align with their moral reasoning level.

So how does this area of research relate to teacher education majors? Johnston and Lubomudrov (1987) researched the relationship between teachers’ level of moral development and their teaching performance. Results indicated that teachers with a high level of moral development were considered more democratic and professionally adequate than other teachers with lower DIT scores.

Of great importance to this study, Lampe (1994) explored the level of moral reasoning among 373 beginning teacher education majors and 158 student teachers. Participants completed the DIT and 3 ethical vignettes, which included ethical dilemmas typically encountered by inservice teachers. Findings indicated an overall below average level of moral reasoning when compared to the average college student. Furthermore, student teachers had significantly lower P scores than did beginning teacher education majors. Lampe attributes this finding to the bureaucratic system of education that relies heavily on rules, regulations, and law and order, which can be found in Stage 4 or Conventional level thinking. Because student teachers are working within a system that possibly stifles principled moral reasoning, a probable cause of the decrease in P scores could be their working environment.
Cartwright and Simpson (2001) found that student teaching performance, as measured by the Student Teaching Performance Score (STPS) of the Texas teacher appraisal system, is not correlated with the P score on the DIT. Fifty-three student teachers at a Texas college were given the DIT and were rated by the STPS, which includes four domains, instructional strategies, classroom management/organization, presentation of subject matter, and learning environment. Therefore, teachers may be meeting the criteria of performance set by the state in which they teach, but are not functioning at a principled moral reasoning level. The researchers indicated the need for Post-conventional, or principled, reasoning due to the increase in minority population of students, the need for social justice in the school system, and the need for recognition of mutual human welfare among both teachers and students.

The research surrounding moral reasoning and college students has become more focused on specific major and/or disciplines of study. For the purpose of this study, the focus will be on future teachers and how and why they differ in relation to moral reasoning among other college students. It is apparent from the above detailed research that ethical training is effective, and certain types of college students are prone to choose disciplines or courses that match their high level of moral reasoning. However, in the aforementioned studies, future teachers demonstrated a low level of moral reasoning despite the obvious need for principled reasoning in their future profession.

*Prejudice and moral reasoning.* Research in relation to prejudice and moral reasoning has previously focused on the effectiveness of multicultural training and correlations between the two constructs. Evans and Foster (2000) examined moral development and racial identity. Sixty-eight subjects completed the DIT and the White
Racial Identity Attitude Scale (WRIAS), which is composed of six levels of racial identity: (a) contact—indicates a lack of awareness of racial issues, (b) disintegration—the discovery of racism, (c) reintegration—the belief of the superiority of the European American-White race and the rejection of other races, (d) pseudo-independence—the intellectual understanding of racial difference and acceptance of other groups, (e) immersion—development of a meaningful definition of one’s own race and the desire to reduce racism in others, and (f) autonomy—the development of a truly nonracist identity (p. 41). The researchers indicated a correlation between the autonomy construct on the WRIAS and the amount of previous multicultural training. However, there was no significant correlation between scores on the DIT and the WRIAS.

Glover (2001) also evaluated the connection of moral reasoning and prejudice. Two hundred seven college students completed a variety of scales including the DIT, the Katz-Hass Attitude and Value Scale, and the McConahay, Hardee, and Batts Scale, which measure modern and traditional racism. Participants also completed a demographics sheet. The researchers found that positive attitudes towards minorities were related to lower levels of modern and traditional racism, correlation coefficients of .45 and .37, respectively (significant at the .01 level) and higher DIT P scores, correlation coefficient of .28 significant at the .01 level. However, a regression analysis of the data did not find moral reasoning as a predictor of attitudes towards minorities. The researchers explained this finding by citing the interaction of other variables, such as level of education since it is strongly correlated with moral reasoning, as the reason for a lack of interaction of attitudes toward minorities and moral reasoning. Based on the current research, no
specific correlation exists between moral reasoning and prejudice or attitudes towards minorities.

**Religion and moral reasoning.** Research in relation to moral reasoning and religion has primarily focused on the level of moral reasoning, as measured by Rest's Defining Issues Test (DIT), and differences in religious and nonreligious subjects. There is research that proposes religious bias in the DIT instrument, while other studies support the validity and reliability of the scale with religious subjects.

Bruggeman and Hart (1996) evaluated the level of moral reasoning in 131 secular high school students and 90 religious high school students in relation to cheating and lying. The researchers administered the DIT and the Circles Test of Hartshorne and May. On the Circles Test, participants were asked to memorize the exact location of 10 circles of varying sizes on a piece of paper and then were directed to close their eyes and attempt to place the numbers in the corresponding circles and report the number of circles they placed correctly. The researchers informed the participants that they could receive extra points toward the final grade in the class based on their performance on the Circles Test. The subjects were told that the "average" number of circles placed correctly was 27, which was considered by the researchers as an unattainable number given the task. This information provided incentives for subjects to cheat. The findings of the study revealed among the high school student participants there was no correlation between cheating/lying behavior and level of moral reasoning. Also, no significant differences were found between the moral reasoning of secular and religious high school students, implying that religion is not a factor in moral reasoning.
Similarly, Good and Cartwright (1998) examined the relationship of the moral reasoning of 360 undergraduate college students attending a Bible university, a Christian liberal arts college, and a state university. Subjects were randomly selected among the three universities at all levels (senior to freshmen) and these subjects completed the DIT. Levels of moral reasoning of freshmen at all three institutions were consistent at the Stage 4 level, implying that the level of principled moral reasoning is independent of religious background. However, results of the study, similar to Jeffrey’s findings (1993), found significant principled moral reasoning gains from freshmen to seniors at the state university and the Christian liberal arts college, which indicates that growth in moral reasoning is expected with the college experience and curriculum. The curriculum at both the state university and the Christian liberal arts college has an emphasis on a variety of information including, literature and philosophy, along with other complex subjects. The Bible university, however, prepares its students for Christian occupations. The researchers found no such freshmen to senior gain in principled thinking among the participants from the Bible university. Overall, the authors noted, “the results of this study suggest that moral judgment development is not related to degree of orthodoxy, high exposure to religious education, or high levels of religious commitment” (p. 274). The researchers noted that, although religious people may be capable of a higher level of principled moral reasoning, they typically endorse lower levels of moral reasoning in order to conform to religious beliefs. Specifically, religious people choose to use law and order reasoning (Stage 4 moral reasoning) when faced with moral dilemmas.

However, Richards and Davison’s (1992) study revealed that some items on the DIT function differently, or measure something other than moral reasoning, for conservatively
religious subjects. The sample pool consisted of 833 Mormons, who are considered a conservatively religious group. Two studies were conducted that focused on item functioning and the possibility of religious bias in the DIT.

In Study 1, the DIT was administered to the participants, and the researchers used a Differential Item Functioning method to determine item bias functioning specific to the group of Mormons, a conservatively religious population. Results of this study reveal a possible 16 to 25 items of differential functioning on the DIT; that is, a possible 25 items function differently for the conservatively religious Mormons. In other words, these items measure something other than moral reasoning for this group of people. The authors speculated that they were instead measuring religious beliefs or values as opposed to the level of moral reasoning.

In Study 2, the participants were asked to determine the consistency of the DIT items in relation to their own religious views or beliefs. The researchers then compared the religious consistency ratings to the differential discrepancy items identified in Study 1 from the DIT. The results of Study 2 provided evidence that differential item functioning is largely due to the religious connotations or underlying religious principles within the items. Specifically, some answers to items were considered a lower level of moral reasoning, although the conservatively religious subjects answered the item based on their own religious beliefs/principles.

Overall, this study found that the DIT functions differently for religiously conservative subjects and raises the questions of its possible cultural and religious limits. The researchers disputed the view of Good and Cartwright (1998) and gave support to the hypothesis that religiously conservative subjects do not achieve high principled moral
reasoning on the DIT due to the lack of distinction between divine law and societal law and order on the moral reasoning measure.

The above research raises questions in relation to the construct validity of the DIT measure when assessing the moral reasoning of conservatively religious subjects. Further research regarding both of these views is needed in order to provide future accurate assessments of moral reasoning using the DIT.

In summary, current research using the DIT indicates no conclusive relationship between moral reasoning and prejudice or racial attitudes nor between moral reasoning and religiosity. Perhaps the most interesting finding that impacts this study is the finding of lower than average P scores for teacher education majors or future teachers. The two major questions relating teacher education majors and levels of moral reasoning include the difference between teacher education majors level of moral reasoning and the level of moral reasoning of average college students and the possible correlates of moral reasoning.

So how does this lower level of principled moral reasoning among both inservice and student teachers affect the teachers’ tolerance in relation to cultural diversity? A lower level of principled moral reasoning indicates less adherence to social justice principles and strict adherence to laws and regulations. Future teachers with low principled moral reasoning may not be willing to accommodate for the diversity in the multicultural classroom, if it is not considered the rule or law in their school. And, even in schools where tolerance is valued, these teachers may lack the moral reasoning skills to guide students toward principles of social justice.
Attributional Complexity

Several studies have been conducted in order to reveal the relationship between attributional complexity and aspects of human nature. The majority of research surrounding this area has depended upon Fletcher et al. (1986) Attributional Complexity Scale as a measure of the complexity of attributional schemata that people use to explain human behavior. This scale measures an individual’s preference of complexity when making causal attributions; that is, attributionally complex subjects tend to prefer several explanations for human behaviors, while attributionally simply subjects prefer minimal explanations for the same behaviors. Within this vast amount of research, several questions have been raised relative to individual differences in attributional complexity (in relation to cognition, social variables, and information gathering), the effects of time constraints, the role of motivation, the differences of internal and external attributions, bias/prejudice, and religion.

Attributional Complexity Scale. The Attributional Complexity Scale (ACS) consists of “seven attributional constructs that can be viewed as ranging along a simple-complex dimension” (Fletcher et al., 1986, p. 876). The constructs include (a) level of motivation or interest (the more a person wants to understand the reasons for the human behavior the higher the attributional complexity), (b) preference for complex rather than simple explanations (explanations that contain more causes are more complex and require higher attributional complexity), (c) presence of metacognition concerning explanations (or the tendency to think about the underlying processes involved in the attributional process), (d) awareness of the extent to which people’s behavior is a function of interaction with others (acknowledging that the social situation is in part a function of a person’s
behavior), (e) tendency to infer abstract or causally complex internal attributions, (6) tendency to infer abstract, contemporary, external causal attributions (instead of simple external attributions), and (f) tendency to infer external causes operating from the past (the ability to take into account past events when making attributions). The levels of measured complexity are consistent across all seven constructs, that is, "people who are more complex on one attributional dimension will be more complex on the other dimensions" (p. 877). Fletcher et al. (1986) study confirmed that the scale had adequate internal reliability, test-retest reliability, discriminant validity, convergent validity, and external validity, which are confirmed by various research (Stadler & Baron, 1998; Schaller et al., 1995; Watson et al., 1990; Murphy, 1994).

**Individual Differences.** Fletcher et al. (1986) detailed research that supported both a more simple attributional process and more complex attributional process, which defined current attributional models as oversimplified. Specifically, the researchers did not support one view of attribution over another because they believed the construct of attribution existed on a continuum, thus the ACS. As with other aspects of human nature there are individual differences within attributional complexity, which identify attributionally complex individuals and attributionally simple individuals. Fletcher et al. accurately predicted that attributional complexity was not related to social desirability, academic ability, gender, dogmatism, or internal/external locus of control.

Schaller et al. (1995) confirmed the correlation between need for cognition and attributional complexity. The 99 participants completed the ACS, the Personal Need for Structure Scale (PNS scale), and the Need for Cognition Scale (NFS). The PNS scale identifies one’s need to order, structure, and organize his/her environment. The NFS
measures an individual's need to engage in complex cognition. Although the researchers found a correlation between ACS and NFC, the specific research cannot identify the type of cognition correlated. Fletcher et al. (1986) also found that attributional complexity is positively related to the need for cognition, which led to hypotheses of a correlation between social intelligence and attributional complexity (Fletcher et al., 1992). This hypothesis has not been fully tested due to inconsistencies in the definition of social intelligence (Fletcher et al., 1992).

Fletcher et al. (1986) also predicted that more complex subjects are less prone to attribution errors. Pope and Meyer (1999) analyzed the relationship between attributional style and jurors' decision-making process. Mock jurors completed the ACS and were shown a videotape of an armed robbery and directed to render a judicial or juror decision in the case. Confirming Fletcher et al.'s hypothesis, the researchers concluded that there are individual differences in attributional style and correlated attributional errors with a lack of attributional complexity.

The way in which subjects gather information to make attributions has also been related to individual differences in attributional complexity. Fletcher et al. (1986) examined subjects' open-ended personality predictions about a given character. The researchers found that attributionally complex subjects spontaneously provided more causes for personality dispositions and selected more complex causal attributions for simple behavioral events, which can be helpful in recognizing individual differences and complex solutions. Also, in comparing psychology majors and natural science majors, psychology majors demonstrated more attributionally complex schemata.
A variety of variables are related to increased attributional complexity. There are positive correlations between attributionally complex subjects and cognition, complex information gathering, and accuracy in attributions. Based on Fletcher et al. (1986) study, attributional complexity is its own construct with high reliability and validity and lacks correlation with many demographic variables, such as age, gender, and academic ability level.

*Time constraints.* As regards to time constraints, or limited amounts of time, (Fletcher et al., 1990) and information gathering (Fletcher et al., 1986), several variables can affect the accuracy of attributions, even in attributionally complex individuals. When given time constraints, subjects tend to make more simple attributions and a decrease in accuracy of attribution is also noted in attributionally complex individuals (Fletcher et al., 1992). However, attributionally complex subjects spend more time in processing difficult causal or attributional dilemmas, which produces more accurate attributional solutions. Furthermore, under time constraint conditions and when given time for in-depth processing, attributionally complex subjects were more accurate than attributionally simple subjects. A significant difference in accuracy among attributionally complex subjects was noted under the in-depth processing and time constraint conditions, with the in-depth processing condition producing more accurate attributional solutions (Fletcher et al., 1992). Researchers attributed the reason for the difference in performance to simple and complex subjects’ motivation level and cognition. In other words, attributionally complex individuals enjoy complex social problems and recognize the complexity of the problem and adjust accordingly (Fletcher
et al.). This study lends further credence to the aforementioned role of motivation in the attributional process and as regards to attributional complexity.

Overall, accuracy is affected by time constraints and information gathering processes; however, attributionally complex individuals still demonstrate more accuracy in making attributions when compared to attributionally simple subjects.

Motivation. Fletcher et al. (1986) also found that both attributionally complex and simple subjects most often made simple attributions when motivation was lacking. Stadler and Baron (1998) found that attributionally complex individuals combined both motivation and ability in order to externally justify their own behavior and to reduce the amount of dissonance, when given an essay topic to write about with which the subjects disagree. Watson et al. (1990) stated, “persons high in the trait [attributional complexity] are intrinsically motivated to understand human behaviors” (p. 111). Of particular interest to this study, Devine (1989) found that attributionally complex individuals demonstrated a decrease in attribution errors when the social problem was challenging and motivating. Subjects were asked to read essays written by other participants, which either detailed a normative position (majority opinion) or a counter normative position (minority opinion). The finding differed when the information provided was normative and considered nonmotivational. However, simple subjects did not differ as regards to the motivation manipulation (normative versus counter normative).

All of these findings lend support for the construct within the Attributional Complexity Scale of motivation/interest level, which leads to the assumption that the attributional complexity is susceptible to motivational factors. Therefore, an
attributionally complex individual could choose not to apply his/her normally superior or complex social problem solving skills.

**Internal and external attributions.** Another characteristic of attributionally complex individuals is that they typically utilize both internal and external attributions in regards to determining behaviors—more specifically internal and external attributions are not used in exclusion of one another (Fletcher et al., 1986). Murphy (1994) detailed integration patterns of both simple and complex subjects. Based on the results of the ACS and answers to causes of a behavioral event, he revealed that attributionally complex subjects tended to integrate both similar and dissimilar information when making attributions, while simple subjects selected a reduced amount of information and demonstrated difficulty in integrating the information. The implication is that simple subjects had difficulty making sense and integrating the vast amount of information; therefore, the simple subjects were not able to incorporate as much information in their decision making and made less complex attributions due to the lack of information utilized. This finding also builds a case for the need for teachers with increased attributional complexity in the classroom.

Similarly, Pope and Meyer (1999) examined the effect of attributional complexity in relation to juror decision-making. Given a videotape of a simulated armed robbery, subjects were asked to determine guilt or innocence of the “defendant.” The researchers found that attributionally simple subjects more often found the defendant guilty, reportedly were more confident in their decisions, and attributed personal causes in relation to the defendant’s behavior. In contrast, attributionally complex subjects used internal and external causes in relation to the defendant’s behavior.
Wanke and Wyer (1996) found that liberally social and political subjects, based on responses to questions about political and social ideology and party affiliation, produced higher scores on the Attributional Complexity Scale. These subjects were also more concerned with opinion of others as opposed to being concerned only with actions, which combined the use of both internal and external information when making a decision.

When 72 subjects were given a persuasive essay that was previously written under constraints (i.e., the author had no free choice in regards to the essay topic) by another person, attributionally complex subjects reportedly focused on the style and content of essays rather than the external constraints, while the simple subjects tended to focus on their own opinion or beliefs about the issue (Fletcher et al., 1990).

Due to the integration of both external and internal information, attributionally complex individuals were more likely to exhibit correspondence bias, which is "the tendency to assign dispositions that are congruent with behavior that is performed under powerful external constraints" (Fletcher et al., 1990, p. 280). Fifty subjects were randomly assigned to an essay position, and were required to write a one-page essay that supported or refuted a political position. Then another two groups of subjects were asked to read the essays (all readers were provided with a full written description of the condition under which the essay was written), one group with time constraints and another without time constraints. These subjects also completed the ACS. Correspondence bias was reportedly higher in attributionally complex readers versus attributionally simple readers when given time constraints.

Although the integration of both internal and external information is positive as regards the consideration of all aspects, it appears that attributionally complex individuals
have difficulty disregarding information, whether internal or external, when it is necessary to make accurate attributions, especially under time constraints.

*Bias and prejudice.* Other areas of research in regards to attributional complexity are less developed, specifically in the area of bias. Differing types of bias can be seen in both attributionally simple and complex subjects. Attributionally complex individuals consistently prefer multiple causes for human behavior, including their own behaviors. When confronted with a dissonant act, an act that does not conform to the ideals they have set for themselves or others, attributionally complex individuals demonstrated considerably less dissonance than attributionally simple subjects. These subjects demonstrated the ability to externally justify behavior, and therefore reduce dissonance in themselves, which would otherwise involve an internal justification (Stadler & Baron, 1998). Attributionally complex individuals exhibit the ability to use their complex attributional schema to reduce dissonance, and therefore produce attributions that may be biased in favor of their own ideals about themselves or others. This finding supports a possible negative aspect of a complex attributional schema in relation to inaccurate attributions.

However, it should be noted that there is inconclusive research in the area of group stereotype formation, another type of bias, in relation to attributional complexity. The use of stereotypes is in direct opposition of tolerance and acceptance of diverse populations. According to Schaller et al. (1995), the effects of attributional complexity on group stereotype formation were inconsistent across two studies. In Study 1, the researchers looked at the relationship between attributional complexity, personal need for structure (PNS), and group stereotype formation. The researchers cited no significant
correlation among these variables, although the variables were negatively correlated. In Study 2, attributionally complex subjects responded to an accountability manipulation, which consisted of the attributionally complex subject informing and describing their own attributions regarding the intelligence level of a group of students. The key to this accountability manipulation was that the attributionally complex individual knew that there was a possibility that the subject involved in the discussion could possibly be a member of the group discussed. This knowledge made the attributionally complex subjects accountable for their attributions regarding the group (i.e., the attributionally complex subjects could possibly be talking to a member of the group evaluated and therefore there is a possibility of offending the student based on the evaluation of the intelligence of the group). The researchers noted the possibility that accountability decreased complexity and led to less accurate group impressions. However, no decisive conclusions can be made from this study.

Religion and attributional complexity. Empirical literature of attributional complexity and religion focuses on the development of a religious attribution theory and correlations with extrinsic and intrinsic religious orientation. A study conducted by Watson et al. (1990) examined the relationship of certain aspects of religion and attributional complexity. Two hundred thirty-four undergraduate psychology students completed the Attributional Complexity Scale, Self-Righteousness measure, personal Indiscriminate Proreligiousness, God as Causal Agent Scale, and Religious Orientation Scale. Results revealed attributional complexity to be highly correlated with the Religious Orientation Scale, which has both an intrinsic scale (identifies religion as a master motive) and an extrinsic scale (emphasizes the use of
religion for selfish means). Attributional complexity was positively correlated with the intrinsic scale and negatively correlated with the extrinsic scale of the above measure. However, attributional complexity was not correlated with the God as Causal Agent Scale, which measures individual differences in religious attribution in relation to the causality of God. Specifically, it looks at the role of God in real world problems or affairs. This lack of a correlation between the two measures led the researchers to question the validity of the GCA scale. The researchers stated: “The failure of the GCA scale to predict Attributional Complexity suggests that the instrument may not measure a completely ‘effective’ attributional system” (p. 117). They did note that although no positive correlation was found between the scales, a negative correlation was not found either, indicating the need for further research with the GCA scale. This study did not provide a decisive conclusion in reference to the relationship of attributional complexity and religion, although it did provide further support in relation to intrinsic versus extrinsic motivation for religion.

In conclusion, attributional complexity is a complex construct. Current research details characteristics of attributionally simple and attributionally complex subjects. The emphasis of the roles of motivation/interest level and time constraints is of particular interest to the role of the teacher in the classroom, which greatly impacts the application of a complex attributional schema. The availability of time and lack of motivation are variables that plague the classrooms due to increased teacher responsibilities inside and outside the classroom. High attributional complexity can be a valuable asset to the teacher in the diverse classroom because attributionally complex individuals prefer to use more information and consider both internal and external variables in decision making,
which can include culturally sensitive information. However, there is little to no research in the area of attributional complexity in relation to education or future teachers. There are a variety of questions that need to be addressed in the area of attributional complexity in relation to teacher education majors. Questions of particular interest to this study include how the variables of acceptance of cultural diversity (nonprejudicial attitudes), moral reasoning, and religion are related to attributional complexity.

Religiosity

Religion research has primarily focused on religious affiliation and religiosity. Religion has been measured in several ways and related to a variety of subjects. The most common way to determine religious affiliation is to rely on self-report measures of subjects— that is, to ask subjects to indicate their religious preferences and identify their religion (Perkins, 1992). On the other hand, religiosity has been measured with complex scales and instruments. Within this research, religious connections with prejudice, attributional complexity, and moral reasoning have been proposed. As previously discussed, no conclusive evidence has been provided indicating the exact relationship between religion and attributional complexity and level of moral reasoning. However, the research detailed below indicates loose connections between religion and acceptance of diversity.

Current research in relation to religion and prejudice has produced positive correlations among intrinsic and extrinsic religious orientation, religious prejudice (that is, prejudice against differing religious groups), and religious fundamentalism (Jackson & Hunsberger, 1999, Kirkpatrick, 1993). However, there are few studies that which
directly compare religion (religiosity and religious orientation) and racial prejudice among college students.

Fulton (1995) examined the relationship of religious orientation, prejudice, and identity status. The sample pool consisted of 257 white heterosexual college students at a Christian liberal arts college in Northern California. The subjects completed the Extended Version of the Objective Measure of Ego Identity Status (based on Erickson’s model of identity status development), items of the Sears’ measure of symbolic racism, which looks at anti-Black attitudes, and the revised Age Universal I-E measure, which identifies internal and external religious orientation, and a measure of anti-homosexual sentiments. The results of the study found positive correlations among identity status measures and religious orientation, but found no relationship between identity status and measures of prejudice. However, the researchers failed to make a direct comparison of prejudice and religion.

Of great importance to this study, Perkins (1992) compared diverse samples of 1,102 college students from several universities in England and the United States as regards religiosity and racial prejudice. The study used two belief value statements as a measure for religiosity. Perkins indicated that religiosity could be determined by respondents’ answers to two personal value statements, which included references to the amount of or importance of spiritual guidance and the use of religion to address moral, social, and political problems. The measure of prejudice or racism was dependent upon subjects response to the following items: “1) ‘It is probable that there are racial characteristics which make some people superior to others’; and 2) ‘Inherited mental and/or physical characteristics tend to make certain ethnic or racial groups better than other groups.’” (p.
Perkins found that moderate religiosity in both England and the United States was significantly correlated with the highest levels of racism. In other words, those subjects who had no strong opinion about religion (were neither high nor low on the religiosity scale) were significantly correlated to measures of racial prejudice.

In conclusion, religion is a complex issue, which obviously has connections to a wide variety of dimensions, including those aspects of our lives that affect decision-making and interactions with people. Surprisingly, there is little conclusive research that supports theories of relatedness between religion and prejudice, attributional complexity, and moral reasoning. This lack of conclusiveness confirms a need to determine the relationship among the aforementioned variables and how these relationships affect the teachers of tomorrow.

**Conclusion**

Increasing the acceptance and tolerance of diverse cultures and individuals is important in the multicultural classroom and in the education of future teachers. The above research detailed the relationship of religion, moral reasoning, and attributional complexity. However, no direct correlations or connections could be made among the variables. Based on this research, there are several questions that need to be answered. Listed below are the questions and hypotheses that will guide this study.

1. What is the relationship between moral reasoning and attributional complexity?

   **Hypothesis 1:** There is a positive significant correlation between moral reasoning and attributional complexity.

2. Does higher moral reasoning and attributional complexity lead to greater tolerance toward diversity?
Hypothesis 2: High levels of moral reasoning and attributional complexity positively and uniquely predict greater tolerance toward diversity.

3. What is the relationship between religiosity and attitudes toward diversity?

Hypothesis 3: High levels of religiosity negatively affect attitudes toward diversity.

4. Does religiosity affect the relationship between moral reasoning, attributional complexity, and attitudes toward diversity?

Hypothesis 4: The level of religiosity uniquely affects the relationship between moral reasoning, attributional complexity, and attitudes toward diversity.
Method

Participants

Participants consisted of 181 undergraduate teacher education majors enrolled in Psychology 310 – Educational Psychology at Western Kentucky University (WKU). This course is required for students seeking teacher certification, which emphasizes the application of psychological theory to teaching and learning and focuses on topics such as classroom management, child development, individual differences, motivation, memory, learning, instruction, and measurement and evaluation. The majority of the participants were Caucasian (159 participants) and female (135 females and 46 males) and 22.05 was the mean age (see Table 1 for detailed sex and ancestry demographics).

Procedure

As a part of course requirements, students participated in a diversity workshop, sponsored by the university, which lasted approximately two and one-half hours. This workshop was developed in order to meet new standards proposed by the National Council for Accreditation of Teacher Education (NCATE). This organization monitors accreditation requirements for teacher education programs. The workshop had several goals which included the following: to educate students about diversity, while emphasizing tolerance and acceptance of diverse populations, to assess diversity opinions and experiences among teacher education majors at WKU, and to use the information collected to develop programming that would fulfill the new NCATE requirements. During the diversity workshop, several pieces of information, including the Attributional Complexity Scale, the Defining Issues Test, a general survey measure with question
related to diversity, and a demographics questionnaire, were collected to help achieve the aforementioned goals.

Table 1.
Sex and Ancestry Demographics for Teacher Education Sample

<table>
<thead>
<tr>
<th>Ancestry</th>
<th>Sex</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>African</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Caucasian</td>
<td>39</td>
<td>120</td>
</tr>
<tr>
<td>Native American</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Unreported Ancestry</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Measures

*Attributional Complexity Scale.* The Attributional Complexity Scale (ACS), as previously described, consists of 28 items that measure the complexity of attributional schema people use to describe human behaviors (Fletcher et al, 1986). The participants were asked to rate their responses to the 28 items within the range of A to G (A=strongly agree, B=moderately agree, C=slightly agree, D=neither agree or disagree, E=slightly disagree, F=moderately disagree, G=strongly agree), which were later converted to a numerical range of +3 to -3, respectively. Subjects who receive high scores on the ACS are motivated to find explanations for behavior, give complex explanations for human behavior, and consider multiple factors in determining causes for behavior, including underlying causes, situational factors, internal and external variables, and variables from the past that may affect the behavior or outcome.
Defining Issues Test. The participants also completed the three-story shortened form of Rest's Defining Issues Test (DIT), which is an objective scored test developed by Rest and based on the moral stage development theory of Kohlberg (Cartwright & Simpson, 2001). The subject is asked to judge the most important factors in the moral dilemma or story, based on which factor would make the most difference in deciding what action should be taken in response to the proposed moral dilemma or story. Each dilemma or story has twelve statements, and each statement corresponds to a specific stage of moral development. The subject rates each statement (by importance level) and then is asked to select the four most important statements in relation to the dilemma and rank these statements by importance level, from 1 to 4 with "1" being the most important. The DIT produces a P score or an overall measure of principled level of moral reasoning, with higher P scores representing higher levels of moral reasoning.

Diversity survey. The general survey instrument, developed by Wilder and Pope, is comprised of 18 items regarding a variety of diversity issues, such as diversity education, affirmative action, special needs students, persons with disabilities, and general questions about social policies in regards to minorities and women. The participants were asked to rate their responses to the items within the range of 1 to 5 (1=strongly agree, 2=agree, 3=unsure, 4=disagree, 5-strongly disagree). It is proposed that an overall measure of acceptance and tolerance of diversity will be generated from this instrument, as well as specific factors within the scale will be measured, such as acceptance of diversity in relation to minorities, persons with disabilities, etc. This scale is a self-report measure based on the opinions and experiences of the participants.
Demographic questionnaire. The demographics questionnaire included basic information regarding sex, age, racial ancestry, type of community lived in while growing up, and questions about relationships between people of other religions or ethnic groups. Another piece of information on this questionnaire included religious affiliation and importance of religion, which is of particular interest to this study.
Results

Descriptive data

As previously mentioned, the sample consisted of 181 teacher education majors, which included 135 females and 46 males. Upon analysis of data collected, several trends were revealed. Consistent with the findings of Lampe (1994), the DIT P scores (Mean = 26.89, SD=15.48) of the sample of teacher education majors were considerably lower than P scores of the average college student mean of 42.3. Based on the findings of Fletcher et al. (1986), the average Attributional Complexity Total score for the sample of college students was 37.6. This figure is considerably higher than the 29.5 mean for this sample. These data suggest that the levels of both attributional complexity and moral reasoning for this sample of teacher education majors are lower than the average college student mean. Also, based on preliminary analysis of the data revealed that the majority of subjects in the sample (n = 111; 61.3%) rated the level of importance of religion as "very important," while fewer subjects rated the importance level as "somewhat important" – n = 55, "neither important nor unimportant" – n = 12, and "not very important" – n = 3. Given that the majority of subjects rated religion as very important, the sample is somewhat skewed in favor of importance of religion.

Diversity survey data

Because other studies using the all of the items on the diversity survey found low internal consistency (J. Wilder, personal communication, June 30, 2002), factor analysis procedures were used with the hope of creating at least one diversity factor with strong internal reliability. The data were factor analyzed using a correlation matrix. Three main factors were found within the 18-item scale: affirmative action/hiring and promotion
practices, diversity education, and general attitudes toward minorities. However, after examining the factors further through a reliability analysis, only one factor was found to have an adequate internal consistency level (affirmative action with an alpha level of .75).

Based on this information, the correlation matrix was used to include other items that correlated with the affirmative action items. A factor analysis was conducted, and, overall, the final scale used includes 9 items, as seen in Table 2, with an alpha level of .79. These results show that the 9-item diversity scale has adequate internal reliability. The scale include items which addresses diversity education, affirmative action, and minority rights and is a measure of general acceptance/tolerance of diversity.

Hypothesis 1

Upon examination of the literature regarding moral reasoning and attributional complexity, it was hypothesized that there would be a positive correlation between the two variables. Based on analysis, a positive significant correlation between attributional complexity and moral reasoning, based on the DIT P scores, was found (r=.22, p<.01, see Table 3).

Hypothesis 2

It was hypothesized that high levels of both moral reasoning and attributional complexity would positively predict greater acceptance of diversity. A multiple regression analysis was conducted to determine the predictive value of the variables of moral reasoning and attributional complexity in relation to the acceptance of diversity. Although the correlation between attributional complexity and the diversity measure was significant beyond the .01 level, no relationship was found between moral reasoning and
Table 2.
Diversity Survey Items and Correlations

<table>
<thead>
<tr>
<th>Scale item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. School curriculum should incorporate a body of content that includes women, racial minorities, and other points of view that are often missing from the classroom. *</td>
</tr>
<tr>
<td>2. Diversity education will be more successful when a more comprehensive range of topics is discussed in greater detail. *</td>
</tr>
<tr>
<td>3. I believe there is too much emphasis on affirmative action.</td>
</tr>
<tr>
<td>4. WKU needs to offer more monies to minority students. *</td>
</tr>
<tr>
<td>5. I feel that more women need to be promoted to higher levels of management. *</td>
</tr>
<tr>
<td>6. The system of evaluation is too biased in favor of blacks in comparison to whites.</td>
</tr>
<tr>
<td>7. I would be willing to participate in more cultural diversity activities. *</td>
</tr>
<tr>
<td>8. Middle-class white males are now being discriminated against, especially in hiring practices.</td>
</tr>
<tr>
<td>9. Generally speaking, blacks need governmental regulations to ensure fair opportunities. *</td>
</tr>
</tbody>
</table>

*Note.* * indicates items which were reversed scored.
acceptance of diversity (See Table 4). The regression equation including moral reasoning and attributional complexity was significant beyond the .01 level; however, t-tests conducted to determine the weight or amount of influence the variables have on the dependent variable revealed attributional complexity to be the only significant contributor to the acceptance of diversity.

Hypothesis 3

Based on the analysis of the data, the hypothesis that high levels of religiosity negatively affect attitudes toward diversity was rejected. A Pearson correlation analysis revealed there is no relationship between religiosity and the level of acceptance of diversity (See Table 3).

Hypothesis 4

In order to answer the hypothesis that the level of religiosity affects the relationship between moral reasoning, attributional complexity, and cultural diversity, an analysis was conducted in order to ascertain the role of levels of religiosity on the aforementioned variables. Subjects were divided into two groups: a highly religious group and a moderate-low religious group. Subjects within the high religious group rated religion as very important and subjects within the moderate-low religious group rated religion somewhat or not important. There were no significant demographic differences between the groups based on sex and ancestry (See Table 5). A moderator analysis was then conducted. For the high religious group, there was a significant positive correlation between the level of attributional complexity and total diversity, which is consistent with previous findings that the level of attributional complexity is predictive of the level of
Table 3.

Correlations Between Levels of Religiosity, Moral Reasoning, Attributional Complexity, And Acceptance of Diversity Among Teacher Education Majors

<table>
<thead>
<tr>
<th>Subscale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Religiosity</td>
<td>-</td>
<td>.068</td>
<td>-.016</td>
<td>-.134</td>
</tr>
<tr>
<td>2. Moral Reasoning</td>
<td>-</td>
<td></td>
<td>.220**</td>
<td>.042</td>
</tr>
<tr>
<td>3. Attributional Complexity</td>
<td>-</td>
<td></td>
<td></td>
<td>.301**</td>
</tr>
<tr>
<td>4. Diversity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < .01, one-tailed.

Table 4.

Regression Analysis Correlations Between Moral Reasoning, Attributional Complexity, And Acceptance of Diversitya

<table>
<thead>
<tr>
<th></th>
<th>Diversity</th>
<th>MR</th>
<th>AC</th>
<th>Diversity</th>
<th>MR</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity</td>
<td>-</td>
<td>.045</td>
<td>.300</td>
<td>Diversity</td>
<td>.277</td>
<td>.000</td>
</tr>
</tbody>
</table>

aN=178.

Note. MR=moral reasoning and AC=attributional complexity.
Table 5.
Ancestry and Sex for High Religiosity and Moderate-Low Religiosity Subject Pools

<table>
<thead>
<tr>
<th>Ancestry</th>
<th>High</th>
<th>M-L&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Caucasian</td>
<td>94</td>
<td>65</td>
</tr>
<tr>
<td>Native American</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Unreported Ancestry</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>High</th>
<th>M-L&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>19</td>
<td>27</td>
</tr>
<tr>
<td>Female</td>
<td>92</td>
<td>43</td>
</tr>
</tbody>
</table>

<sup>a</sup>M-L=moderate-low

acceptance of diversity. For the moderate-low group, there was also a significant positive correlation between attributional complexity and diversity; in addition, there was a significant positive correlation between the level of attributional complexity and moral reasoning (See Table 6). There was a significant difference, at the .05 level, found between the groups in relation to the correlation of moral reasoning and attributional complexity, based on the calculated z-score. However, no significant differences were found between the groups in relation to the correlation of moral reasoning and acceptance
of diversity or the correlation of attributional complexity and acceptance of diversity, as shown by the calculated z-scores (See Table 6).

<table>
<thead>
<tr>
<th>Correlations</th>
<th>High</th>
<th>M-L</th>
<th>z-scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral Reasoning and Attributional Complexity</td>
<td>.140</td>
<td>.360*</td>
<td>-2.32*</td>
</tr>
<tr>
<td>Moral Reasoning and Diversity</td>
<td>.028</td>
<td>.083</td>
<td>.37</td>
</tr>
<tr>
<td>Attributional Complexity and Diversity</td>
<td>.270**</td>
<td>.350**</td>
<td>.53</td>
</tr>
</tbody>
</table>

*p < .05. *p < .01.

*Test of significance between the groups was measured using .00 and .36 because .14 is not significant from zero.
Discussion

The aforementioned variables involved in this study are complex. The relationships between these variables, based on a sample of teacher education majors, are important for the education of future teachers and today's students. Based on the analysis of the data, there are several findings of great interest and importance.

When looking at the relationship between attributional complexity and moral reasoning, the analysis revealed a significant positive relationship. This finding is not surprising based on use of complex reasoning and information gathering within both of these constructs. Another finding is the below average scores for this sample of teacher education majors. These results indicate that these future teachers have not fully developed their ability to choose complex attributions or explanations for human behavior and have not fully developed their knowledge base or acceptance of higher ordered justice principles when compared to college peers. The lack of these skills could lead to poor problem solving, unfair judgment of students, and a lack of concern for the overall greater good of the students in the classroom in order to adhere to policies and procedures as opposed to adhering to a greater social standard. Also, teachers are models for students in the classroom and the lack of these skills lead to poor modeling and possibly could negatively impact students' views, as regards problem solving and justice in the classroom.

It was also found that attributional complexity positively predicts acceptance of diversity. This finding suggests that teacher education majors who prefer to provide complex explanations for human behavior in a variety of situations are also more accepting of diversity. Based on previously detailed research in relation to information
gathering and attributional complexity, teachers who are lower in attributional complexity will be more likely to attribute one cause or a simple cause for human behavior, and teachers who are higher in attributional complexity will be more likely to consider a variety of factors when making causal attributions. For example, teachers with higher attributional complexity will not likely consider race, ethnicity, or a disability as the sole cause for behavior, but instead will consider this information along with other information. Based on the results of this study, a pattern exists between the level of attributional complexity and the way in which information regarding diverse populations is processed.

Although there is no relationship between the level of moral reasoning and acceptance of diversity, the connection between the level of moral reasoning and attributional complexity cannot be ignored as a catalyst for further research in this area, including the possibility of attributional complexity as a bridge between the two variables. As stated previously, the level of attributional complexity has a significant positive correlation between the level of moral reasoning and the level of acceptance of diversity. Also, there is no relationship between the level of moral reasoning and the level of acceptance of diversity. Specifically, attributional complexity is predictive of the level of acceptance of diversity, and therefore with the increase of attributional complexity comes the increase of acceptance of diversity. Also, attributional complexity is positively correlated with moral reasoning, meaning that as attributional complexity increases or decreases so does the level of moral reasoning. With this complex relationship in place, is it possible that the level of moral reasoning could affect the level of acceptance of diversity through attributional complexity? For example, it has been found that ethical training increases
the level of moral reasoning and with this increase should come the increase of attributional complexity, and based on the predictive value of attributational complexity, the level of acceptance of diversity also should increase. In theory, this relationship is a probable outcome of ethical training. Unfortunately, neither the mediating effect of attributational complexity nor the longevity effects of ethical training was tested in this study.

Surprisingly, religiosity played a minor role in the relationships of the variables. The level of importance of religion did not affect the level of acceptance of diversity. However, subjects in the moderate-low religious group had a significant correlation between the level of attributational complexity and moral reasoning, while there was no correlation between attributational complexity and moral reasoning for subjects in the high religious group. The difference between the groups in regards to the relationship among attributational complexity and moral reasoning implies that religiosity is a factor when measuring these constructs. However, religiosity did not influence the relationships that included the construct of acceptance of diversity.

The lack of influence of religiosity in relation to the other relationships is surprising. This lack of influence could be due to the limitations of the general diversity instrument, which will be detailed later in this paper, or the lack of variation among responses to the importance of religion question, given that the majority of the sample responded that religion was very important. Perhaps a larger, more religiously varied sample would have revealed different results.

So what do these results mean in relation to teacher education majors? One of the major focuses of this study was the importance of teachers’ acceptance of diversity in the
classroom. Both the acceptance of diversity and level of moral reasoning were the two constructs known to assist in everyday decision making in the classroom, specifically with diverse populations. Although the level of moral reasoning of teacher education majors is much lower than that of the average college student, this study revealed relationships that may be helpful in establishing, not only a higher level of moral reasoning but a higher level of attributional complexity and acceptance of diversity. These findings also reveal the importance of the level of attributional complexity in relation to moral reasoning and acceptance of diversity. In the classroom, teachers with high levels of these constructs will be better equipped to deal with not only issues related to diversity but also with other complex issues that may arise.

Limitations

The major limitations of this study surround the general diversity survey, which measures the level of acceptance of diversity. This instrument was intended to be used as an 18-item scale with several factors, upon analysis as previously described, the scale was used as a 9-item scale with one factor of general diversity. This scale, which has an internal consistency level of .79, was newly constructed for use with this sample and may not generalize to other populations. Due to the lack of general use of the scale, the reliability and validity of the scale could not be fully tested. Also, diversity is a broad construct, and this scale did not encompass all types of diversity, including areas which could may have a specific impact for highly religious subjects, such as sexual orientation. So there does exist some uncertainty about what might be found with a more broadly informative instrument.
Also, another limitation includes the lack of variation among the responses to the religiosity/importance of religion question. Over half of the sample considered religion as “very important.” The construct of the scale did not allow for a large difference between the two groups (high religiosity and moderate-low religiosity), which may have impacted the results of the hypotheses relating to the construct of religiosity.

**Implications**

There are many implications for further research within this study. As stated previously, the use of ethical training with teacher education majors may prove helpful in increasing their overall tolerance/acceptance of diversity. After all, ethical training has been proven effective in increasing the level of moral reasoning in college students (Loe & Weeks, 2000; Gorman & Duffy, 1994), and with further research to explore the possible mediating effect of attributional complexity an increase in acceptance of diversity may be possible. Also, a replication of this study with other populations may generate findings supportive of this study. The most needed area of further research would be in the area of application. It would be interesting to see to what extent subjects apply these constructs within the classroom, given that there are time constraints and possible motivational factors within the classroom, which we know affect attributional complexity and thus affect acceptance of diversity and moral reasoning.

In summary, teachers today have a tremendous amount of responsibility and pressure. In essence, teachers are the parents within the school environment and not only are accountable for academics in their classrooms but also have to monitor and teach appropriate behaviors to the students in their classrooms. These appropriate behaviors are taught through both direct instruction and indirect instruction. Constructs such as a
teacher’s level of attributional complexity, level of moral reasoning, and acceptance of diversity possibly impact this behavioral instruction—for example, through teacher modeling. It would be likely that greater attributional complexity for teachers would increase their ability to problem solve and make accurate attributions about their students’ behaviors, while an increase in students’ attributional complexity could lead to a decrease in conflicts or misunderstandings. An increase in the moral reasoning level of a teacher could result in what students view as a fair classroom, and in turn students may be more willing to follow rules, complete assignments, and learn based on teacher policy which encompass these social justice principles. Also, if a teacher is accepting of diversity and the policies of the classroom reflect tolerance, students also will be more likely to share that level of acceptance. This acceptance could decrease the amount of teasing, increase tolerance, decrease conflicts, and increase the self-confidence level of the students within the classroom. Research regarding these variables is greatly needed in order to support current findings and further link these constructs to educational practice.
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