The Relationship Between Co-Curricular College Experiences and Students' Moral Development

Gina F. Astorini

University of Miami, gastorini@juno.com

Follow this and additional works at: https://scholarlyrepository.miami.edu/oa_dissertations

Recommended Citation
https://scholarlyrepository.miami.edu/oa_dissertations/1706

This Open access is brought to you for free and open access by the Electronic Theses and Dissertations at Scholarly Repository. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of Scholarly Repository. For more information, please contact repository.library@miami.edu.
UNIVERSITY OF MIAMI

THE RELATIONSHIP BETWEEN CO-CURRICULAR COLLEGE EXPERIENCES AND STUDENTS’ MORAL DEVELOPMENT

By

Gina F. Astorini

A DISSERTATION

Submitted to the Faculty
of the University of Miami
in partial fulfillment of the requirements for
the degree of Doctor of Education

Coral Gables, Florida

August 2016
A dissertation submitted in partial fulfillment of
the requirements for the degree of
Doctor of Education

THE RELATIONSHIP BETWEEN CO-CURRICULAR
COLLEGE EXPERIENCES AND STUDENTS’ MORAL
DEVELOPMENT

Gina F. Astorini

Approved:

Scotney Evans, Ph.D.
Associate Professor of Educational
and Psychological Studies

Soyeon Ahn, Ph.D.
Associate Professor of
Educational and Psychological
Studies

Susan Mullane, Ph.D.
Clinical Associate Professor of
Kinesiology and Sport Sciences

Guillermo Prado, Ph.D.
Dean of the Graduate School

Scott Ingold, Ed.D.
Executive Director,
Enrollment Management
Systems and Analytics
The Relationship Between Co-Curricular College Experiences and Students’ Moral Development

Abstract of a dissertation at the University of Miami.

Dissertation supervised by Professor Scotney Evans
No. of pages in text. (145)

This study addresses a growing concern of academic dishonesty in higher education based on the theory that an increase in moral development may lead to an increase in moral behavior. Students’ moral development and its relationship with student characteristics, co-curricular college experiences, and students’ level of involvement (degree of commitment) in those experiences were examined. Three research questions were posited: (1) What is the relationship between student background characteristics (sex, academic level, and age) and students moral development? (2) What is the nature of the relationship between undergraduate involvement in co-curricular experiences (student government association, Greek life, Greek life leadership, structured internship, and faculty mentored research) and moral development? (3) What is the nature of the relationship between the level of involvement in co-curricular college experiences and moral development? Data were analyzed from a convenience sample of college students gathered through an on-line electronic survey. Moral development was measured by the moral judgment score (N2 index) obtained through participant responses to the Defining Issues Test-2 (DIT-2) (Rest, Narvaez, Bebeau, & Thoma, 1999). The relationship between the independent variables and moral development was measured using
independent samples \( t \)-tests, between-subject Analysis of Variance (ANOVA), and general linear modeling.

Two statistically significant findings were uncovered. Students who reported participation on a faculty mentored research project had higher levels of moral development (N2 index) than students who did not participate in this experience \((p = .03)\); and sex showed statistically significant differences between males and females and moral development (N2 index) \((p = .04)\). The findings suggest the need for more support of faculty members and their research projects to encourage student researchers. Evidence from this study shows college involvement through faculty member engagement plays a critical role in students’ moral development and lays the groundwork for further investigation of factors that may influence this relationship.
ACKNOWLEDGEMENTS

First, I want to acknowledge and thank my wonderful and supportive dissertation committee, who, through their collective wisdom and guidance have helped me finish my degree. Thank you Dr. Scotney Evans, my committee chair. Dr. Evans who emphasized scholarly excellence and focused attention to the details that I could no longer see while maintaining a calm and comforting demeanor throughout this process. I will always be grateful to Dr. Soyeon Ahn for her mentorship, methodological and statistical brilliance, enduring patience, and commitment to me and all of her students. I want to thank Dr. Susan Mullane for her gentle and solid advice, “do one thing for your dissertation every day”. This guidance along with her sense of humor, kept me grounded. I am grateful to Dr. Scott Ingold for his conceptual insights and generosity of time during our Saturday morning meetings. I also want to thank Dr. Carol-Anne Phekoo, advisor, for her candor, dedication and confidence in me.

Thank you to my colleagues, faculty, and staff in the School of Education and Human Development for consistently providing solid words of encouragement. Especially, Dr. Walter Secada who occasionally reminded me that “the best dissertation is a done dissertation”.

Finally, I am thankful for my parents and great-grandparents who always stressed the importance of education; to my daughters, Angela and Cristiana, who provided patience, love and hugs when needed. I love you both so much! To my husband Raimondo, thank you for your continuous and absolute support of me. You are my rock.
## TABLE OF CONTENTS

| LIST OF TABLES ................................................................. | vii |
| LIST OF APPENDICES .......................................................... | viii |

### Chapter

1. **INTRODUCTION** ...................................................................... 1  
   - Moral Development Affecting Moral Behavior .......................... 4  
   - Sanctions as an Intervention on Moral Behavior ....................... 5  
   - Moral Development and the Impact on Society ......................... 6  
   - College-level Contextual Factors Impacting Moral Development ... 6  
   - Moral Development and Co-Curricular College Experience .......... 9  
   - Faculty Interaction and Impact on Moral Development ............. 10  
   - Theoretical Framework ..................................................... 12  
   - The Purpose of the Study .................................................. 14  
   - Research Questions ......................................................... 15  
   - Definitions ......................................................................... 16  

2. **LITERATURE REVIEW** .......................................................... 20  
   - Moral Development .......................................................... 21  
   - Developmental Theory ....................................................... 22  
     - Kohlberg’s Theory ......................................................... 22  
     - Rest’s Theory ............................................................. 26  
     - Piaget’s Cognitive Theory .............................................. 27  
   - Moral Education Philosophy ................................................ 28  
   - College Student Impact Model ............................................. 30  
   - College Involvement and Moral Judgment ............................. 33  
   - Co-Curricular Experience .................................................. 38  
     - Greek Life ................................................................. 38  
     - Greek Life Leadership ................................................... 39  
     - Student Government Association ..................................... 40  
     - Experiential Learning and Moral Development .................... 41  
     - Internship ................................................................. 43  
     - Faculty Mentored Research Projects .................................. 44  
   - Student Characteristics on Moral Development ...................... 46  
     - Sex ............................................................................ 46  
     - Academic level and age ................................................... 47  
   - Summary ........................................................................... 48  

3. **METHOD** ........................................................................... 51  
   - Research Design ............................................................... 51  

iv
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population and Sample</td>
<td>51</td>
</tr>
<tr>
<td>Sampling Procedure</td>
<td>52</td>
</tr>
<tr>
<td>Priori Power Analysis</td>
<td>53</td>
</tr>
<tr>
<td>Data Collection</td>
<td>53</td>
</tr>
<tr>
<td>Independent Variables</td>
<td>55</td>
</tr>
<tr>
<td>Student Background Characteristics</td>
<td>55</td>
</tr>
<tr>
<td>Type and Level of Co-curricular Experience</td>
<td>56</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>57</td>
</tr>
<tr>
<td>The DIT and DIT-2</td>
<td>58</td>
</tr>
<tr>
<td>Scoring of the DIT-2</td>
<td>60</td>
</tr>
<tr>
<td>Psychometrics of the DIT-2</td>
<td>61</td>
</tr>
<tr>
<td>Data Screening</td>
<td>61</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>62</td>
</tr>
<tr>
<td>4 RESULTS</td>
<td>63</td>
</tr>
<tr>
<td>Student Characteristics</td>
<td>63</td>
</tr>
<tr>
<td>Student Background</td>
<td>63</td>
</tr>
<tr>
<td>Frequencies by Co-curricular Experiences</td>
<td>63</td>
</tr>
<tr>
<td>Moral Judgment</td>
<td>64</td>
</tr>
<tr>
<td>Student Background and Moral Judgment</td>
<td>65</td>
</tr>
<tr>
<td>Sex</td>
<td>66</td>
</tr>
<tr>
<td>Academic Level</td>
<td>66</td>
</tr>
<tr>
<td>Age</td>
<td>67</td>
</tr>
<tr>
<td>Co-curricular Involvement and Moral Judgment</td>
<td>67</td>
</tr>
<tr>
<td>Student Government Association</td>
<td>67</td>
</tr>
<tr>
<td>Greek Life</td>
<td>67</td>
</tr>
<tr>
<td>Greek Life Leadership</td>
<td>68</td>
</tr>
<tr>
<td>Internship</td>
<td>68</td>
</tr>
<tr>
<td>Faculty Mentored Research</td>
<td>68</td>
</tr>
<tr>
<td>Level of Co-curricular Involvement and N2 Score</td>
<td>69</td>
</tr>
<tr>
<td>Greek Life</td>
<td>69</td>
</tr>
<tr>
<td>Greek Life Leadership</td>
<td>69</td>
</tr>
<tr>
<td>Internship</td>
<td>70</td>
</tr>
<tr>
<td>Faculty Mentored Research Project</td>
<td>70</td>
</tr>
<tr>
<td>Total Co-curricular Experiences</td>
<td>71</td>
</tr>
<tr>
<td>Final ANOVA Model on N2 Scores</td>
<td>71</td>
</tr>
<tr>
<td>5 DISCUSSION</td>
<td>73</td>
</tr>
<tr>
<td>Summary of the Study</td>
<td>73</td>
</tr>
<tr>
<td>Research Question 1</td>
<td>73</td>
</tr>
<tr>
<td>Research Question 2</td>
<td>74</td>
</tr>
<tr>
<td>Research Question 3</td>
<td>75</td>
</tr>
<tr>
<td>Major Findings</td>
<td>75</td>
</tr>
<tr>
<td>Secondary Findings</td>
<td>81</td>
</tr>
<tr>
<td>Implications</td>
<td>84</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Implications for Institutions</td>
<td>85</td>
</tr>
<tr>
<td>Implications for Faculty</td>
<td>86</td>
</tr>
<tr>
<td>Implications for Students</td>
<td>88</td>
</tr>
<tr>
<td>Limitations and Delimitations</td>
<td>88</td>
</tr>
<tr>
<td>Future Research</td>
<td>91</td>
</tr>
<tr>
<td>Broader Research Objectives</td>
<td>92</td>
</tr>
<tr>
<td>Practice</td>
<td>93</td>
</tr>
<tr>
<td>Conclusion</td>
<td>94</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>96</td>
</tr>
<tr>
<td>TABLES</td>
<td>114</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>122</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.</td>
<td>Kohlberg’s 6-Stages of Moral Judgment</td>
<td>114</td>
</tr>
<tr>
<td>Table 2.</td>
<td>Student Characteristics</td>
<td>116</td>
</tr>
<tr>
<td>Table 3.</td>
<td>Frequency Table of Participants By Co-Curricular Experience</td>
<td>117</td>
</tr>
<tr>
<td>Table 4.</td>
<td>N2 Score by Student Characteristics</td>
<td>118</td>
</tr>
<tr>
<td>Table 5.</td>
<td>N2 Score by Level of Co-curricular Experiences</td>
<td>119</td>
</tr>
<tr>
<td>Table 6.</td>
<td>N2 Score by Level of Co-Curricular Experiences</td>
<td>120</td>
</tr>
<tr>
<td>Table 7.</td>
<td>Final Table by N2 Score</td>
<td>121</td>
</tr>
</tbody>
</table>
LIST OF APPENDICES

<table>
<thead>
<tr>
<th>Appendices</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Permission granted to Remove Demographic Information</td>
<td>122</td>
</tr>
<tr>
<td>B. Permission to shorten the DIT-2</td>
<td>123</td>
</tr>
<tr>
<td>C. N2-Index Measure Explanation</td>
<td>124</td>
</tr>
<tr>
<td>D. A-Priori Power Analysis</td>
<td>125</td>
</tr>
<tr>
<td>E. Institutional Review Board Approval</td>
<td>126</td>
</tr>
<tr>
<td>F. Participant E-mail Feedback</td>
<td>128</td>
</tr>
<tr>
<td>G. Survey used for Data Collection</td>
<td>129</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

Moral development of college students should be one of the most important objectives for institutions of higher education. The relationship of college education on student cognitive abilities and moral development has been long studied for over 40 years (Bowers, 1964; Feldman & Newcomb, 1969; Kuh, 1995; McCabe & Trevino, 1993, 1996, 1997; McNeel, 1994; Mentkowski & Associates, 2000; Pascarella & Terenzini, 1991; Rest, 1979; Rest & Narvaez, 1991). Institutions of higher education have historically focused on delivering the values of ethics, higher cognition, and reasoning meant to support citizenry and promote democratic principles, which would benefit and advance society (Ignelzi, 1990; Ikenberry, 1997; King, 1997; Mathiasen, 1998; Pascarella, 1997). Contemporary research should aim to explore the potential factors that would affect student’s moral judgment ability in higher education.

The two principles associated most with moral development and widely recognized as important factors of an individual’s moral development are the increase in principled reasoning skills and improved moral judgment (Kohlberg, 1971 & 1976; Rest, 1973, 1975, 1976; Rest, Cooper, & Coder et al., 1974; Rest & Deemer, 1986). Throughout this study, the improved moral judgment skills of students in higher education are used as a measure of moral development. Likewise, the need for more research regarding how college can increase a student’s moral and ethical values system and thus improve their moral judgment ability has been underscored.

The 1979 Carnegie Council on Policy Studies identified the decline of ethical practices of students present in the increased amount of cheating as well as the decline of institutional integrity through various policy abuses as contributing to the deterioration of
academic life. Student cheating behavior threatens the educational compact that institutions have established with society (May & Lloyd, 1993; Lambert, Hogan & Barton, 2003). In response to various academic integrity violations and a reported increase in student cheating, the Carnegie Foundation in 2003 further challenged U.S. colleges and universities to address moral and civic development in their curricular goals. In 2013, the Association of American Colleges and the National Association of State Colleges and Universities emphasized the importance of moral development and the fundamental relationship it has on the development of good citizenry, and social responsibility (Knefelkamp, 2013; Reason, 2013).

Gains in moral judgment have shown an association with lower levels of academic dishonesty, which is an important outcome to be addressed at the college level (Blasi, 1980; Pascarella & Terenzini, 1991, 2005; Rest, 1999; Rest & Deemer, 1986; Thoma, Rest, & Barnett, 1986). Studies have examined the means by which students can develop their moral judgment skills through various institutional interventions (Astin, 1991; Astin & Sax, 1998; Feldman & Newcomb, 1969). Outcomes used to assess the effectiveness of interventions in these studies include student enrollment in ethics courses, the level of involvement in service learning projects and interactions with peers, social groups and faculty members (Astin & Sax, 1998; Astin, Sax, & Avalos, 1999; Kuh, 1995; Kuh, Cruce, & Kinzie, 2008).

Findings are quite mixed. For instance, intervention effects assessing peer interaction found both positive and negative relationships with student moral development (Boyce & Jenson, 1978; Eisenberg, 2004; Graham, Monday, Obrien, & Steffen, 1994; Mayhew & Engberg, 2010; Pascarella & Terenzini, 1991). However, peer
interaction combined with specific programs aimed toward community or service
learning had a greater positive relationship with moral reasoning (Astin, 1977, 1984;
Astin & Sax, 1998). Such variation in those findings suggests the need for further
examination of intervention effectiveness on student development, and more specifically,
moral development.

Of many factors, college student involvement has been widely studied as a
potential factor affecting student’s experience and development at the college.
Institutions use the information gathered in these studies so to inform efforts for
developing effective student opportunities for engagement and to meet the educational
and expected societal standards of a college education. In addition, to societal standards,
institutions study ways to understand how these opportunities and institutional
interventions affect student’s academic, social and psychosocial outcomes. One of these
standards is moral development of the citizenry (Altbach, Gumport, & Berdahl, 2011).
Various researchers have studied how moral development may be increased or affected
by the environmental interaction. The purpose of this study was to contribute to the
research conducted on college student moral development by investigating the
relationship of college co-curricular activities, degrees of involvement, and student
factors with measured levels of moral judgment as an indicator of moral development.
Moral Development Affecting Moral Behavior

Moral psychologists argue that cognitive moral development leads to moral behavior (Piaget, 1953; Kohlberg, 1972, 1974; Narvaez, 2009; Nesteruk, 2007; Rest, 1983). Researchers of moral behavior focus on the psychological processes and its relationship with various experiences, social factors, individual characteristics and education (level, discipline and pedagogical philosophy) on individual moral judgment processing (Kohlberg, 1971, 1972, 1976; Perry, 1970, 1981; Rest, 1973, 1975; Rest & Narvaez, 1991; Rest, Narvaez, Bebeau, & Thoma, 1999). Evidence in multiple studies has shown that a relationship between an individual’s moral development and predictive moral behavior exists (Berger, 1998; Blasi, 1980; McCabe & Bowers, 1994; McCabe & Trevino, 1997; Mullane, 1999; Rykiel, 1995; Storch, 2002).

Moral behavior is a moral choice to act upon principles universally accepted as right and wrong. Kohlberg (1969) argued that moral behavior is value-neutral and based on the individual’s concept of justice and knowledge of social and cultural norms. Moral behavior is cultivated within the universal laws of social order, which acknowledges and respects the rights of others. Actions that infringe upon those laws of social order or which may lead to harm of others are considered to be immoral behavior. Academic dishonest practices violate the universal moral laws, as the action results in an individual receiving credit for work or grade attainment that the individual did not earn. This may result in providing credentials that qualify an individual for a job where the value of the qualification can have significant and detrimental effect for other individuals and possibly society. Thus it is reasonable to introduce measures that may improve moral
judgment as institutions seek to improve moral behavior by addressing academic integrity issues such as cheating.

**Sanctions as an intervention on Moral Behavior**

Institutions, to demonstrate a commitment to improved moral behavior, have implemented policies that are driven by sanctions and rules. These policies have not led to long term positive results. Student honor codes have shown to be effective in neutralizing cheating behaviors and protecting academic integrity on a case by case basis (McCabe, 1993; McCabe, Butterfield & Trevino, 2001; McCabe & Pavela, 2000; McCabe & Trevino, 1993, 1996, 2002). However, follow-up studies have demonstrated that cheating is on the rise despite institutional policy interventions (McCabe, 2005a, 2005b; McCabe, Butterfield, & Trevino, 2002).

The institutional policy interventions do not address the structural fundamental process of addressing moral behavior through increased moral development of students. Preventing cheating behaviors by threat of punishment represents the lowest level of moral development according to Kohlberg’s Moral Development Theory (Kohlberg, 1969, 1974). Sanctions that may encourage moral behavior without affecting an individual’s structure of thought processing will only provide a situational improvement in moral behavior. Creating opportunities to address the cognitive, moral developmental process may have shown to have an equal or greater impact on cheating behaviors than sanctions and provide long term sustainable outcomes.
Moral Development and the Impact on Society

Low moral development levels have shown a relationship with academic dishonest practices impacting student well-being, institutional reputation and the promotion of positive societal values. Studies have found that cheating behaviors lead to negative personal, social, and economic and financially destructive outcomes, including criminal acts (Beck & Ajzen, 1990; Fass, 1990; Harding, Carpenter, Finelli, & Passow, 2004; Mayhew & Hubbard, 2009; Nonis & Swift, 2001). These studies found that poor moral behavior in college may continue to destroy the individual’s post-college career. The potential consequences include poor moral judgment in business and personal relationships as well as overall physical well-being (Nonis & Swift, 2001).

A recent study found that students who admitted to academic misconduct and held positive attitudes toward cheating are more likely to report emotional and physical deterioration, commit substance abuse and dependency and engage in criminal behaviors (Blankenship & Whitley, 2000). Those previous studies provide further evidence that increasing student moral development will have far reaching positive outcomes. Moreover, these studies provide a framework to further assess the theory that college cheating is a form of low moral development and may have greater societal impact than previously assumed.

College-level Contextual Factors Impacting Moral Development

Empirical studies on moral development are often based upon college student development theories and college impact models. College impact models draw attention to the level of student interaction with the college environment, academic, co-curricular
and social interactions (Astin, 1984; Pascarella & Terenzini, 1991). Pascarella and Terenzini (1991, 2005) conducted one of the most comprehensive studies on student moral development and found that college, specifically the level of interaction that students have in college, significantly and positively affect moral development. This study supported findings in previous research that found that the level of commitment as well as the amount of time that students engaged in student activities had a profound and positive impact on their personal inter-relational, cognitive and moral development (Astin, 1984, 1985, 1991; McCabe & Trevino, 1997). Moral development and college impact theory are the basis of the current study in which the college-level factors affecting student moral development are investigated.

Several college-level contextual factors have been studied in relation to student moral development. These include student involvement in service learning projects (Astin & Sax, 2004) and ethics courses (Wilhelm, 2008) and faculty interaction (Rest & Narvaez, 1994) that all demonstrated positive effects on student moral development. As studies reveal that college can help students increase moral development, a framework for further investigation into the factors which support this college outcome become apparent.

Rest and Narvaez (1994) conducted a comprehensive study in the area of student development, and found a relationship existed between moral development and formal education defined by course work. Rest and Narvaez also revealed a negative relationship between moral development and college student involvement, encouraging further studies to understand a seemingly paradoxical finding. However, their study did not distinguish
student involvement in extra-curricular activities by defining them as social or academic in nature. Further research has found that peer interaction would increase moral development and is related to specific student social and academic interaction (Astin, 1984; 1993; Kuh, 1995; Kuh et al., 2008). One research study found that the level of social co-curricular involvement was the second most significant predictor of principled reasoning scores on the Defining Issue Test (DIT) (Finger, Bordouin & Baumstark, 1992; Rest, 1979). Extra-curricular engagement should be viewed as primarily peer-interactive and related to social activities.

The influence of the academic environment through co-curricular activities on students has been minimally studied. The theories on student development identify the importance of providing students an opportunity to engage in challenging and stimulating projects such as faculty mentored research and structured internships, may well expose students to the broad perspectives that according to researchers, may contribute to higher principled reasoning scores (Mason & Gibbs, 1993; Rest, 1994; Rest & Narvaez, 1994). Others have argued that students who are exposed to experiences that are cumulative and reinforced with divergent perspectives impact cognitive moral reasoning (Rest, 1973, 1983, 1986). Further research has revealed that student exposure to individuals with advanced moral reasoning (such as faculty members and mentors) have been associated with higher principled reasoning skills in students (McNeel, 1994; Rest et al, 1999; Rest & Narvaez, 1979, 1994, 1998). As such, the academically related co-curricular experiences may be a helpful vehicle to help build-up moral development, suggesting
more research regarding the relations of both social extra-curricular and academic co-
curricular activities to student’s moral development.

**Moral Development and Co-Curricular College Experience**

Co-curricular experiences can be operationalized as academic in nature as they often require higher order reasoning and critical thinking skills to navigate successful engagement in the task. These activities are opportunities for experiential and inquiry-based learning. Student involvement in these experiences has been shown to lead to positive outcomes for students such as greater retention and graduation rates as well as increased graduate school matriculation (Astin, 1993; Zydney, Bennett, Shahid, & Bauer, 2002). Co-curricular student involvement in experiential and inquiry based learning combined with faculty interaction outside of the classroom, has found to yield positive moral development (Finger, et al., 1992; McNeel, 1994). This finding suggests that undergraduates may view the role that faculty have at an institution as well as their high regard for research practices, bound to a principle of ethics greater than their own (McCabe, 2005). This may support further investigation to discover if there is a relationship between student’s moral development and faculty mentored research or experiential projects that students engage with faculty.

Students reportedly regard faculty research with high levels of positive attitudes toward moral standards (McCabe, 2005). Support for further investigation of the relationship between student and faculty interaction in co-curricular experiences such as experiential learning opportunities and research project participation and moral development, is that by researching a topic or area of interest, one is essentially creating
knowledge. According to the theory of moral development, the capacity to affect moral functioning involves engaging the deliberative mind with self-reflection, guidance of a mentor, and socially relevant connections (Baumeister & Leary, 1995; Ericsson & Charness, 1994; Narvaez & Gleason, 2009; Rest, 1983). These experiences may raise awareness and influence the closing of the gap between knowing what is the “right” thing to do and then acting on it. As these cognitive structural changes may be associated with a higher moral stage and ultimately lead to greater levels of academic integrity or more negative attitudes toward academic dishonesty.

**Faculty Interaction and Impact on Moral Development**

Faculty members generally have the greatest interaction and can have the largest impact on student attitudes and values (Bertram Gallant & Drinan, 2006, 2008; Glass & O’neill, 2012). Student involvement with faculty outside of the classroom can affect student’s moral development (Bertram Gallant & Drinan, 2006; Pascarella & Terenzini, 1991, 1995, 2005). Studies have shown that faculty led activities that lend student involvement in co-curricular opportunities and provide diverse cultural and interactive activities, have demonstrated an increase in moral judgment (Astin & Sax, 1998, 2005; Derryberry & Thoma, 2000; Kuh & Hu, 1999; McNeel, 1994; Pascarella & Terenzini, 1995). Consistent with these studies on diverse learning opportunities and moral development, another longitudinal study found that students who reported faculty interaction experiences during college, scored three times higher in principled reasoning skills on the DIT (Rest, 1979), than students who did not report similar faculty interaction experience (McNeel, 1994). Students may associate higher levels of moral judgment with
faculty and thus relevant work on research projects or experiential learning projects may provide opportunities that facilitate moral development.

Historically, faculty have the longest relationships with institutions and build their personal and professional reputations with the institution. Institutional integrity requires faculty support for continuous commitment to moral development interventions for students (Brubacher, 1972; Dalton, 1998). Research and found that students respond positively to institutional efforts such as honor codes when faculty demonstrate adherence to the principles of institutional integrity policies (Bertram Gallant & Drinan, 2008). They also found that when the institution itself seeks to address its own integrity in the following areas of student cheating, financial aid misconduct, and sexual harassment there was a positive relationship with the overall measurement of student moral development.

A reciprocal relationship may exists as improving ethical behavior in students may strengthen institutional integrity. Improving institutional and student integrity should be a priority for colleges and faculty are invested in these fundamental principle outcomes of higher education (Bertram Gallant & Drinan, 2006). The social contract that has existed between society and colleges and universities should be reinforced by a renewed commitment to student moral development (Paldy, 1996; Altbach, 2004). The support for faculty involvement in the improvement of student ethical behavior should be easily identified in institutional policies and protocol.
Theoretical Framework

Two theoretical frameworks that the current study was based upon are Moral Development and The College Impact Model. First, the theoretical framework used to understand moral development is Kohlberg’s (1969) theory, drawing from the formal cognitive operations that were studied by Piaget (1953). Kohlberg’s development theory is considered to be the most dominant and widely accepted framework to study moral judgment and principled reasoning skills in students (Rest, 1979). Kohlberg’s theory is a six stage multi-level hierarchal model with ascribed reasoning skills and competencies which determine the stage and level of an individual’s moral development (Kohlberg, 1969, 1971, 1976). Kohlberg’s theory of moral development studies the transformations that occur in a person’s structure of thought (Kohlberg, 1976; Kohlberg & Hersh, 1977). The impact of college involvement on these transformations to student thought processing was studied.

Second, Rest’s theory on college student moral judgment and the quantitative instrument that he has developed to measure moral judgment, the DIT (Rest, 1979), is grounded in the research that Kohlberg conducted using his qualitative instrument, the Moral Judgment Inventory (Kohlberg, 1974). Further research on moral development prompted Rest to edit the DIT, using recent knowledge gained in the field of moral development research, As a result, he and his colleagues developed The Defining Issues Test-2, (DIT-2) (Rest, Narvaez, Bebeau, & Thoma, 1999). The DIT-2 is grounded in Kohlberg’s theory that people at different points of development will interpret moral
dilemmas differently (Rest, 1986). The DIT-2 will be fully developed in the method section.

The moral development theory related to sex differences developed by Gilligan will be discussed to explain sex related disparities that exist in the literature on moral development and may be revealed in this study (; Baird, 1980; Coates, Smith & Deis, 1994; Davis, 1993; Gilligan, 1977). It is expected that this study would support previous research which finds a significant variance in moral development based on sex differences.

Astin’s sociological College Impact Model and Student Involvement Theory will be cited to link evidence, if any, with student co-curricular involvement on moral development (Astin, 1977, 1984). Astin’s model explains how college affects students with his Input-Environment-Outcome (I-E-O) theory (Astin, 1970, 1991). The environment interaction theory, I-E-O, which is the underlying value in Astin’s student impact theory will be used as a human aggregate model to support a relationship between student involvement and the specific environmental or experiences on student’s moral judgment (Astin, 1968, 1993; Kuh, Hu, & Vesper, 2000).

Both Kohlberg and Astin are widely regarded for their work in their respective fields of moral development and student involvement and their theories have been selected for this study based on the fundamental principles and groundwork that each have provided for researchers in higher education. The results of this study would be used to help promote various co-curricular activities as having an impact on student moral development and subsequently, academic integrity.
The Purpose of The Study

Moral judgment is a critical college student outcome for the institution, the student and society. Higher education has traditionally focused on developing student skills that allow for morally informed judgment and decision making that may lead to good citizenry and strong educational practice (Altbach, Gumport, n& Berdahl, 2011; Paldy, 1996; Pascarella, 1997; Pascarella & Terenzini, 2005). A vast amount of research has been conducted to investigate the effects of college experience on student social, cognitive and academic abilities, as well as career and financial outcomes (Pascarella & Terenzini, 2005). However, moral development of college students has not been studied with the same scope of inquiry, even though, it is equally important to understand how college may help increase moral development. Therefore, the current study examined the relationship of college student involvement on student’s moral development, which was represented as student’s moral judgment skills measured by the DIT-2 (Rest et al., 1999).

The current study is unique in that co-curricular activity engagement and levels of commitment were evaluated to explain the variation in moral development scores. As only few studies exist to measure the relationship of moral development and student participation in applied learning activities, the present study is important to build on evidence of the relationship between certain co-curricular activities and moral development. Even though studies have shown that student involvement in academic co-curricular experiences such as participation in research projects, internships and faculty interaction leads increased levels of interpersonal and intellectual self-esteem, improved grades, persistence and overall greater satisfaction with their undergraduate experience
(Astin, 1977; Pascarella & Terenzini, 1991) only a few studies have focused specifically on co-curricular experiences and their effects on moral judgment (Biggs & Barnett, 1981; Cooper & Schwarz, 2007; Finger, et al., 1992; King & Mayhew, 2004, 2010, 2012; Kuh, 1995; McCabe & Bowers, 1997). Based upon Kohlberg’s moral development theory (1969), the current study focused on experiential learning and inquiry based objectives that encompass some of Kohlberg’s environmental stimuli that he theorized to be necessary for moral development to occur. The experiences that were measured in this study are faculty mentored research projects, involvement in student government, Greek life, and student internships. It was expected that the results will underscore the importance of experiential learning, role taking, exposure to moral reasoning above one’s own, and conflict assessment on cognitive growth and maturity (Kohlberg, 1976, 1978; Lind, 1997).

**Research Questions**

Three research questions were examined in the current study.

1. What is the nature of the relationship between undergraduate background characteristics (sex, academic level, and age) and students’ moral development?

2. What is the nature of the relationship between undergraduate involvement in co-curricular experiences via student government, participation in Greek life, Greek life leadership, structured internships and faculty mentored research projects), and the students’ moral development?

3. What is the nature of the relationship between the degree of commitment of undergraduate student involvement in co-curricular college experiences Greek
life, Greek life leadership, structured internships and faculty mentored research projects?

Definitions

For the purpose of this study, the following terms are necessary to define and/or operationalize variables in this study. These definitions are intended to provide clarity to the extant literature.

Academic Dishonest Practices is defined as providing or receiving assistance in a manner not authorized by the instructor in the creation of work submitted for academic evaluation, also presenting work or words of another for the purpose of academic evaluation without proper acknowledgment (McCabe, 1990). Specific actions consist of wide venues of interpretation (Schmelkin, Kaufman, & Liebling, 2008). Strict constructionist views classify everything from crib note cheating, stealing an exam, fabricating information such as references in a paper, plagiarism, falsifying information to a professor to obtain extended time on an assignment as academically dishonest (Ashworth, Bannister, & Thorne, 1997). Copying from another student’s exam with or without their permission and allowing students to copy from their exam and providing or receiving information about an exam that one person has taken or is about to take, and buying or selling papers also represent academic dishonest practices i.e. cheating (Lambert, Hogan, & Barton, 2003). Gehring and Pavela (1994) defined academic dishonesty as “…an intentional act of fraud, in which a student seeks to claim credit for the work or efforts of another without authorization…to include forgery of academic
documents, intentionally impeding or damaging the academic work of others, or assisting other students in acts of dishonesty” (p.5).

**Academic Integrity** is defined as the taking of responsibility to respect and protect the learning experience from fraudulent and dishonest practices (McCabe, 1992; McCabe et al., 2001); to protect the epistemology that academic institutions are founded and to support and create a collegial culture where both collaboration and individualism are equally valued so as to attain truth and knowledge through virtuous behavior (Bowers, 1964; McCabe et al., 2001b).

**Co-Curricular Involvement** for the purpose of this study is a didactic component of a learning experience that compliments college course work and engages the student in the field of study. Involvement includes but is not limited to structured and supervised internship experiences, participation in faculty lead research opportunities and other out of class learning experiences where students are held accountable for their work with designated learning objectives; described as experiential learning opportunities which can be classified as a formal educational activity relating to the “concreteness, directness, and involvement contained in learning activities” (Evans et al., p.138).

**Cognitive Development** is a chain of events in human behavior based on a general cognitive mechanism that initiates from a stimulus and results in a reaction or response (Piaget, 1953; Baldwin, 1969, Kohlberg, 1969). Cognitive Schema refers to an individual’s knowledge used to interpret a stimulus and organize a structure in the mind influenced by experiences (Derry, 1996; Narvaez & Bock, 1998). It is an interpretive process that guides the individual’s structural framework of organizing, thinking and
approach to problem solving (King, 2009). The structural theory identifies the stages of
development based on individual and environmental interactions.

**Interactionism/Involvement** is a process defined as the product of interaction between the
individual and the environment (Astin, 1970, 1985). Students learn by becoming involved
and the level of involvement impacts characteristics, skills, knowledge, values and beliefs
environment that affect the rate of outcome on moral development will be studied. Astin
(1984) suggests that both the quantity and quality of the “physical and psychological
energy that students invest in the college experience” are necessary to study the impact of
college experience on students (p. 297).

**Moral Development** is a theory of a cognitive process that combines conformity and the
internalization of cultural norms formed from interaction with the environment that
changes in the direction of the postulated theory (Dewey, 1934; Kohlberg, 1969, 1974,
1984; Rest, 1986, 1993). It is conceptualized as incremental increase in principled
reasoning ability that may not be imposed on an individual. It is a psychological process
based on higher order principled reasoning skills that results when an individual
internally reorganizes thought patterns based on experiences and interactions with diverse
environmental stimuli and struggles with internal conflict (Kohlberg, 1969; 1971; 1976;
Narvaez, 2010). The cognitive process allows for the essence of mature moral functions,
developing capacity for empathic concern, moral imagination, moral meta-cognition in
**Moral Judgment** is the application of higher order reasoning skills that according to Kohlberg, Levine, and Hewer (1983) individuals will assign a structural reasoning by assuming a “primacy of justice” (p.92). Kohlberg, Levine, and Hewer (1983) theorize that justice reasoning and recognizing the universal rights of others are aligned as “… the prescriptivity of moral judgment is a fundamental component of justice reasoning which bases prescriptions and duties on a recognition of others rights” (p. 100).

**Principled Reasoning** also often referred as moral reasoning, is a psychological construct of cognitive skills that an individual uses to resolve moral dilemmas (Piaget, 1965; Kohlberg, 1969). Piaget believed that morality is expressed in the logic of action (Piaget, 1965). He posited that as individuals reflect on their actions and the impact of those actions on others, that solutions to dilemmas are revealed in stages of morality reflective in principled reasoning (Rest et al., 1999).

**Stage Sequencing of Development** is described as the progression through pre-described stages where each stage is more differential than the previous with a more advanced and complex thought process (Kohlberg, 1969).

**Values Clarification** is the concept of applying neutral contextual scenarios so that there are no single accepted correct answers in moral development education. It is important for students to have clear views about their values (Maher & Kohlberg 1972; Hersh, Paolitto, & Reimer, 1979).
Chapter 2: Literature Review

The current study aims to understand the level of moral development of college students and to examine how co-curricular experiences via faculty mentored research projects, internships, student government association, and Greek life relate to students’ moral development. The main moral development are derived from theories of student development and are used to guide this study. The theories used are Kohlberg (1969, 1976)’s and Rest (1979, 1986)’s moral development theories, and Astin’s student involvement theory (Astin, 1984, 1993). In addition, a cognitive-developmental approach grounded in the works of Piaget and Kohlberg, which explains moral development through three levels of moral reasoning with two stages within each level, was used. This theory provides the theoretical framework that conceptualizes moral judgment as a part of college student development.

Of several theories and models on college student development, Kohlberg’s cognitive theory is particularly relevant to college students because this theory posits that motivation for an individual’s reasoning will affect his or her actions and beliefs and that these motivations are directly influenced by the environment (Kohlberg, 1969, 1976). Second, Rest has built on Kohlberg’s research to develop his four components model that helps provide support for the often unbalanced dichotomous relationship between levels of moral development and moral actions (Rest, 1979). Lastly, Astin’s College Impact Model provides support for the theory on college experiences and student development. Astin’s model provides a structured psychological profile on the impact of college and how environmental characteristics and college experiences on student cognitive development (Astin, 1993). The cognitive developmental theories grounded by Kohlberg,
Rest, and Piaget are reviewed in this chapter along with moral development education, Astin’s Student Involvement theory. Then, theoretical and empirical evidence relating co-curricular experiences and student characteristics to moral development are discussed.

**Moral Development**

Cognitive development and moral development have been interchangeably used in the literature. Research evidence relating cognitive development to moral development suggests cognitive development as a facilitator of moral development (Goodman, 2010; Hersh, Paolitto & Reimer, 1979; Kohlberg, 1969, 1976; Perry, 1981; Rest, 1975; Tomlinson, Keasy, & Keasey, 1974; Turiel, 1965). Kohlberg formulated a moral developmental theory that comprises of stage and sequence ethical processing similar to Piaget’s theory on cognitive development (Kohlberg, 1969). As such, Kohlberg’s moral development theory is grounded in cognitive development theory and defines individual’s principled reasoning skills and moral judgment abilities as tangible values that constitute moral development. Kohlberg expanded upon Piagetian theory to explain the rationale for moral reasoning and development. Kohlberg’s hierarchical model of moral development is founded on stages of justice reasoning and meta-ethical assumptions based on value neutral application of context (Kohlberg, Levine, & Hewer, 1983).

The Kohlberg model is designed to explain a theoretically complete identification of the moral domain based on individual responses. The model is categorized under the following principles: rules, conscience, personal welfare, welfare of others, sense of duty, role taking, punitive justice, positive justice and motives that have evolved from longitudinal research projects (Kohlberg, 1969, 1971, 1977). As discussed, cognitive development and moral development are linked in the theoretical literature. Kohlberg
further expanded the theory to include a conceptual map for how moral development is organized (Table 1 provides a full visual of Kohlberg’s Model).

**Developmental Theory**

Moral development is conceptualized as incremental increase in moral reasoning ability through a psychological process that results when an individual internally reorganizes thought patterns and process a response to a problem or dilemma. Theorists believe that this psychological process is based on experiences and interactions with diverse environmental stimuli and struggles with internal conflict (Kohlberg, 1969, 1971, 1976; Narvaez, 2010). The study of moral development looks at the transformations that occur in a person’s structure of thought and motivation. Development of these thought patterns is considered a progression of cognitive growth in a hierarchical sequential process as promoting reasoning processes one stage above the thinking level of the individual (Kohlberg, 1969; Piaget, 1953). Much of the development theory is based on the cognitive development framework established by Piaget. Kohlberg based his initial research on Piagetian cognitive task models and assumes that cognition and moral affect are inseparable (Kohlberg, 1969).

**Kohlberg’s theory.** Kohlberg’s theory on moral development is based on thought organization and is reflective of the person’s stage response and behavior (Kohlberg, 1969). He constructed the moral judgment theory based on three contextual descriptions: (1) Structural Organization, (2) Developmental Sequencing, and (3) Interactionism. The contextual basis of Kohlberg’s theory is relevant for the current study that investigates the relationship between college student’s academic co-curricular and extra-curricular
experiences and moral development (Kohlberg, 1971; Rest, 1973). Each of three constructs is related and essential to moral development.

First, the structural organization context of moral reasoning is the consistent processing of information. Second, the developmental sequence context is the progression through differentiated stage development and incorporates the previous stage. Sequencing of moral development is conceptualized as a consistent method of assessment based on maturity of moral judgment and behavior and is evaluated from the social perspective of justice reasoning (Colby & Kohlberg, 1978). Finally, the context of interactionism is defined as the effect of environmental stimuli on the person and their resulting moral reality (Kohlberg, 1969). It is reasoned that college may provide curricular enhancements that would support psychological processing that supply a degree of challenge that forces internal reflection. In the current study, it is hypothesized that college involvement may provide the kinds of experiences and interactions that result in increased moral reasoning and higher level moral development.

Various college experiences provide an opportunity to cultivate an environment ideal for moral development beyond academic work and expectations. Kohlberg acknowledges that moral maturity requires cognitive maturity as well as diverse social experiences that allow for role-taking opportunities (Kohlberg, 1976; Kohlberg & Mayer, 1972). Role-taking is at the heart of social justice reasoning as it involves taking the attitudes of others and applying an understanding based on the experience of self and others and relating it to the social constructs. Role-play allows for the existence of moral conflict, which Kohlberg believes is the greatest stimulant for moral development and advancement to higher stages within the model (Kohlberg, 1969). It is hypothesized that
students who partake in college interactions that allow for role-play and the application of higher order reasoning skills will have higher levels of moral judgment. In the current study, students who are involved in co-curricular experiences such as student government, internships or research projects, are conceptualized as taking on a new role of research assistant, investigator or a leader of change. In this way, students may play important roles as an individual responsible for collecting information, analyzing data, collecting or synthesizing literature, or developing, asking and answering research questions.

An important aspect of Kohlberg’s model is the identification and conceptualization of six stages of moral development through three levels. Three levels include (1) Pre-conventional level comprised of stages 1 and 2, (2) Conventional level comprised of stages 3 and 4, and (3) Post-conventional level comprised of stages 5 and 6. Each level incorporates an increasingly complex set of cognitive reasoning skills with an autonomous conception of morality in comparison to the previous stage (Boyce and Jenson, 1978; Kohlberg, 1971).

Kohlberg described the first level of moral development as pre-conventional morality in that ethical decisions are based on punishment. The two stages within this level being the earliest stages of moral reasoning identified as obedience and punishment, and stage 2 as individualism and exchange. The underlying fundamental process in Level one is the morality of obedience whereby individuals categorize right and wrong based on self-preservation and avoidance of punishment (Colby & Kohlberg, 1987; Kohlberg, 1969, 1972). An individual who chooses a course of action based on punitive responses is
identified as having pre-conventional level I moral development, known as heteronomous morality, (Kohlberg, 1969; Kohlberg & Hersh, 1977).

Level two is defined as the *conventional morality* level, or one of conformity to social expectations. Level two is the level of cognitive/moral development that characterizes most college students upon entry into college (Kohlberg, 1971, 1972). The two stages in this level are identified as mutuality of interpersonal relationships and social systems combined with conscience (Kohlberg 1969, 1972). These stages address social conformity and a desire for maintaining social order, which is similar to punishment and obedience in Stage 1, but represents moral progression because the individual supports the social order and principles of laws and rules that reinforce mainstream acceptable conduct and norms that guide friendships and relationships in society (Kohlberg, 1969, 1972).

Level three is identified as *post-conventional morality* and represents the highest level of moral responsibility. The two stages in Level three are defined as social contract or utility and individual rights and universal ethical principles. Stage five acknowledges individual rights and need to abide by laws for the welfare and protection of rights for all. Stage six recognizes a universal set of moral principles and a personal commitment to them (Kohlberg, 1976). A complete description of Kohlberg’s level and stages with accompanying explanations can be found in Table 1.

Likewise, the conceptualization of Kohlberg’s theorized stages for the purpose of the present study allows for interpretations of the association between student experiences and morality and integrity to represent developmental processes. The moral developmental process of stage integration through environmental interaction underlies
the manifestation of moral judgment explained by Kohlberg as the foundation for increasing principled moral reasoning abilities (Kohlberg, 1969, 1976; Rest, Cooper, Coder, Mesanz, & Anderson, 1973).

**Rest’s theory.** Rest identifies individual progress through stages of moral reasoning by determining a decrease in lower stage reasoning and an increase in higher stage reasoning (Rest, 1979) and posits that this is a continuous process. The cognitive evaluative structures that an individual applies to critical issues within a dilemma provide a rationale for the level of principled reasoning used in a situation. Alternatively, Kohlberg asserts that stage attainment is holistic and complete; once the individual has identified with higher stage reasoning, the former stage is discontinued (Kohlberg, 1969, 1976). Rest suggests that having principled moral judgment is one of the four moral predictors that can lead to moral action, which is an ideal college student outcome. The other three predictors of Rest’s theory, moral sensitivity, moral motivation and moral character, can be influenced by environmental factors (Rest, 1986). However there is little empirical evidence that exposure to higher education can affect these other three factors, which are theorized to engender principled actions.

The current research would contribute to the theoretical literature by establishing evidence for a connection between the kinds of environmental exposure available in higher education and college student moral development. The current research also has applied implications, in terms of potential ways colleges can facilitate moral development among students. This is an important construct given the rising concern for lack of integrity among this population of students as indicated by studies which find increasing levels of cheating (McCabe, 1992, 1993; McCabe & Bowers, 1994; McCabe & Trevino,
Understanding the relationship of co-curricular involvement and levels of moral development is the proposed outcome of interest and may have implications for how higher education may address academic dishonest practices with sustainable intervention.

**Piaget’s cognitive theory.** Cognitive moral development theory focuses on the reasoning process used to rationalize a moral dilemma rather than the context of that person’s values or belief system. Piaget is regarded as the pioneer theorist in the area of cognitive development (Kohlberg, 1971) based on his extensive work with children. Piaget considered human intelligence as the fundamental and comprehensive explanation of the human acquisition of knowledge through the coherent systemization of adapting to environmental stimuli (Piaget, 1953). His theory focused on two processes defined as assimilation and accommodation as directing a person’s cognitive growth and moral maturity. Piaget refers to the methods of organizing information as *the stage of development* (Dunska & Whelan, 1975).

Piaget (1965) hypothesized that the fundamental contributor to one’s moral developmental process is the environmental factors to which a person is exposed. Interaction with the environment (*Assimilation*), leads to subsequent cognitive stages and transformations that are applied to reasoning (Piaget, 1965). Likewise, assimilation describes the model of human acquisition of new information and fitting it into the information that the person has already learned. *Accommodation* describes the model where humans acquire new information and replace it with information that they have learned (Piaget, 1965). In the current study, which examines the association between academic co-curricular involvement and moral development, involvement is
conceptualized as a source of new cognitive information. This information is gained through environmental exposure to various stimuli that may require the individual to reconstruct their previous cognitive thought patterns.

**Moral Education Philosophy**

Kohlberg (1969) and Rest (1973)’s theories are amplified by historical and contemporary arguments regarding the purpose of moral education. For example, Kohlberg advocated for a moral education philosophy constructed on an ideology of systematic and developmental approaches in education, which are defined by intrinsic value and not the explicit teaching of values (Kohlberg, 1972, 1976). Kohlberg theorized that values, virtues, and character education should be incorporated into educational curricula as objectives within a program designed to promote moral development (Power, Higgins, & Kohlberg, 1989). Further studies have supported Kohlberg’s theory based on the findings that individuals learn by constructing knowledge about their world and processing this information initially as tacit knowledge, followed by formalizing into explicit knowledge (Keil & Wilson, 1999). Therefore, Kohlberg believed extensively in the importance of moral philosophy and that education is not complete without a moral component.

Kohlberg advocated for curricula with courses in moral reasoning. He believed that curriculum must address social justice and democratic ideals, which can impact moral judgment explicitly (Kohlberg, 1979). The elucidation of a moral philosophy, conceptualized in the form of a moral education is necessary to help students develop those values and skills that contribute to a psychologically fulfilling life (Kohlberg & Mayer, 1972). A moral education will give instruction on traditional societal values and
aligning student behaviors and beliefs to function more effectively in society. Moral educators develop student’s cognitive, social, and moral capacities to achieve optimal emotional, psychological and social function (Kohlberg & Mayer, 1972). These moral education principles invoke engagement and interaction as the processes through which moral development occurs. In the current study, the domain of engagement and interaction hypothesized as important for moral development is students’ involvement in co-curricular opportunities such as participating in student government association, Greek life, Greek life leadership, internships, faculty mentored research projects and the process through which participants may gain opportunities for increasing their level and stage of moral reasoning and judgment.

Piaget, Kohlberg, and Rest embraced the ideals of individual experiences impacting cognition and moral development. Contemporary research builds upon these theories of social interactions stimulating psychological mechanisms, which are critical for understanding the development of moral judgment (Mayhew & Engberg, 2010). Mayhew and Engberg’s (2010) study provided evidence for the importance of coursework in moral development that is complemented with diverse student engagement in the classroom. Further support for student engagement is evident in cognitive-developmental theories that the stage of development influencing a person’s reasoning is the result of the individual’s interaction with his environment (Boyce & Jenson, 1978; Colby & Kohlberg, 1987; Rest, 1975; Turiel, 1973). The position that interaction is a critical aspect of moral development, along with Astin’s theory of student involvement supports Kohlberg’s theory on moral development as stage processing, and underlies the theoretical rationale for the current study.
College Student Impact Model

College student involvement, as the underlying principle in the College Student Impact Model, in experiential learning opportunities provides the opportunity for moral philosophical principles to be invoked and developed. The student’s involvement and interaction with faculty in educationally experiential programs could be associated with moral development. This theory is bolstered by previous work examining the impact of college student involvement on affective psychological outcomes (Astin, 1986; Pascarella & Terenzini, 2005). The College Impact Model was developed to understand how college experiences holistically influence students through various interactions and measured outcomes (Astin, 1986). Astin’s impact model does not specifically measure behavioral changes such as attitudes toward academic integrity nor participation in academic dishonest practices. The model supports evidence that college impacts student development through involvement.

Astin’s Input, Environment, Outcome theory (I-E-O) has been utilized widely in studies of college student involvement and college impact (Astin, 1962). The I-E-O sociological model theoretically explains the change or growth in students under various environmental conditions. The Input factor is the student characteristics at the time of initial entry to college. The Environment refers to the various college programs, policies, faculty, peers and educational experiences. The outcome refers to the measurement of student characteristics (values, cognitive development, achievement), after college exposure and interaction with the environment (Astin, 1984; Pascarella & Terenzini, 2005). The current study operationalizes the E (environment) on the O (outcome), using the college impact model which emphasizes the energy on task, defined as the physical
and psychological energy spent on any given activity, including but not limited to course work, clubs, student government, faculty coordinated internships, or faculty-lead research projects.

The college impact model is measured by student outcomes. The model conceptualizes college affects by developing a taxonomy of outcomes, involving three dimensions: 1) type of outcome, 2) type of data, and 3) time (Astin, 1973). The first dimension defines cognitive (intellectual) outcomes as those that involve higher order mental processing such as knowledge acquisition, decision making, application of information and reasoning and non-cognitive. Non-cognitive outcomes or affective outcomes are defined as student attitudes, values, self-concepts, aspirations, behaviors and personality dispositions (Astin, 1985, 1993). The task of assessing these changes and developmental outcomes are defined by first understanding the meaning of student change, developing student outcome measures, and designing analyses of college impact. Previous research however, establishes that changes in student’s values and beliefs should influence positive behaviors (Astin, 1977; Feldman & Newcomb, 1969; Kohlberg, 1974; Rest, 1979). The current study seeks to understand which involvement activities may affect moral development which could have positive implications on academic integrity and for society.

The second dimension of the college impact model assesses the type of data or information used to measure cognitive and non-cognitive effects of college. Psychological data and behavioral data are the two broad categories of data utilized to measure observable changes (Astin, 1977). Research on psychological data which measures the effect on college such as cognitive skills that reflect Piagetian formal
reasoning, cognition, critical thinking, values and attitudes, has generally been based on single sample inquiries with consistent positive results (Pascarella & Terenzini, 2005). Behavioral data provides more concrete assessment outcomes which measure educational level, specific skills, occupation and income (Astin, 1973; Pascarella & Terenzini, 2005). The impact model supports this study, which seeks to measure a psychological outcome that could inform behavioral practice.

The third dimension of Astin’s model is time. Time is defined as the short and long-term effects for which college change can be measured (Astin, 1973). This study will not be a longitudinal study; however, the research on long term effects of psychological and behavioral changes in college students is well documented (Feldman & Newcomb, 1969; Kuh, Schuh, Whitt, et al., 1991; Pascarella & Terenzini, 2005). The three dimensions of Astin’s model of college affect taxonomy, inform this study with regard to understanding how co-curricular experiences could influence college student’s moral development. The various developmental and psycho-social theories and models of college student change are discussed later and used to inform this study.

Likewise, Astin’s I-E-O model of college impact establishes a theoretical framework for how college experiences can affect a student’s moral reasoning in diverse activities within the college environment. Previous empirical evidence exists for supporting the relationship between quality college experiences that engage students intellectually, socially and culturally with a mentor relationship through coursework, active learning, experiential learning and service learning opportunities and students’ moral judgment, ethical development and growth (Astin & Sax, 1998; Chickering & Gamson., 1991; Glass & O’Neill, 2012; Gurin, Dey, Hurtado, & Gurin, 2002; Kuh, 2008;
Nesteruk, 2007; Pascarella & Terenzini, 2005; Turrentine, Esposito, Young, & Ostroth, 2012). The use of the I-E-O model help a researcher identify the moderating role of student background characteristics (I) and environmental variables (E) to understand the underlying process of gaining educational and psychological development as ultimate outcomes.

**College Involvement and Moral Development**

The relationship between college involvement and moral development has been minimally studied. However, those limited studies have consistently found that the institutional environment influences student’s intellectual and social development (Berger & Millem, 1999; Hernandez, Hogan, & Hathaway, 1999; Huang & Chang, 2004). The effects of college on student moral development have provided varying results. Several studies on traditional campus experiences and involvement have found a negative relationship with moral reasoning (Astin, 1994; Berger & Millem, 1999; Kuh, 1991; Pascarella & Terenzini, 1991). However, McCabe and Trevino (1997) found that the level of extra-curricular involvement was positively linked with academic dishonesty and lower levels of moral reasoning even when age, GPA, and gender were controlled. Such contradictory findings might be possibly explained by looking at the differential effect of moral reasoning by type of academic involvement, which could be divided into two categories, academic and social. This may help explain the mixed results in previous studies that look at the effects of college student involvement on moral development (Derryberra & Thoma, 2000; Pascarella & Terenzini, 1993).

Evidence of college student moral development associated with student interactions has been identified in studies that researched specific course characteristics.
Those college experiences that focus on academic co-curricular opportunities for group discussion with diverse peer interaction and viewpoints have found a positive relationship with higher levels of moral development (Pascarella & Terenzini, 1991; Rest, 1993; Rest & Narvaez, 1991; Rest & Thoma, 1985). These studies have resulted in implications for practice that recommend courses in diversity and ethics and should have smaller class size to promote discussion and advance diverse views. Studies on student participation in service learning projects, found a strong and positive impact on increased moral reasoning (Astin & Sax, 1997, 1998). Researchers refrain from suggesting that there is a causal effect, however evidence suggests that meaningful and intellectually engaging experiences have a positive outcome on moral reasoning.

Studies on college student’s cognitive moral development have revealed an association between moral judgment and co-curricular activities of college student involvement (Biggs & Barnett, 1981; Cooper & Schwarz, 2007; Mayhew, Seifert, & Pascarella, 2010, 2012; McNeel, 1994). The results of these studies have shown both positive (Mayhew, Seifert, & Pascarella, 2010, 2012, McNeel, 1994) and negative (Biggs & Barnett, 1981; Cooper & Schwarz, 2007; Storch, 2002) relationships between co-curricular activities and moral development, suggesting further investigation on mixed findings.

One of the few studies explicitly on college student involvement and its effect on moral development was by Biggs and Barnett (1981). The study looked at college student experiences and measured the impact on moral judgment using a pretest-posttest design. The DIT (Rest, 1979) was administered to measure moral judgment ability of students entering their freshman year and then again at the end of the junior year. Initial score on
the DIT was found to be the strongest predictor of moral reasoning score measured at the end of student’s junior year. Further analysis revealed that experiences in college involvement yielded lower scores on the DIT in the junior year. College involvement was then classified into categories of political engagement, academic, cultural, and traditional campus experiences. In their study, the student who scored highest on the junior DIT was found to be more likely to engage in academic, cultural, and socio-political experiences. Traditional college involvement such as participation in Greek life resulted in lower moral development scores on baseline measure due to age and education level. Further analysis suggested that student with lower pre-test scores on the DIT may have lower student involvement in traditional college experiences such as Greek life.

A meta-analysis of 9 longitudinal studies and 13 cross-sectional analyses conducted by McNeel (1994) found that students who engaged in off-campus academic activities had 1.7 times higher moral development than their counterparts who had not engaged in the same experience. This meta-analysis also revealed that students who engaged in individual learning experiences or who had out of classroom experiences interacting with faculty demonstrated higher levels of moral judgment. The results of the McNeel’s meta-analysis supported the fundamental theory of the proposed research and revealed that qualifying co-curricular experiences as experiential learning opportunities may impact moral development.

A study conducted by Cooper and Schwarz (2007) investigated 123 students who violated campus judicial codes and studied the relationship between selected demographics and the student’s moral judgment level. The study then examined a portion
of students (113 out of 236) who were not involved with code violation and studied the relationship with selected demographics and their moral judgment. The moral judgment level was assessed for all students in the study using the DIT-2 (Rest, Narvaez, Bebeau, & Thoma, 1999). It was shown that the non-code violators scored significantly higher on the DIT-2 than code violators (Cooper & Schwarz, 2007). This study supported previous research that there is a negative association between moral judgment and Greek life affiliation (Cohen, 1982; Derryberra & Thoma, 2000; Kirkuliet, 1994; McCabe & Bowers, 1996; McCabe, Trevino, & Butterfield, 1997; Pascarella & Terenzini, 1999; Storch, 2002). Overall, Greek and Non-Greek women scored the highest in this study (Cooper & Schwarz, 2007): Non-Greek women had the highest mean on Principled Reasoning score (designated as a P score) of 43.4, followed by Greek women ($\bar{P} = 40.2$), non-Greek men ($\bar{P} = 40.2$), Greek men ($\bar{P} = 38.7$).

The Cooper and Schwarz (2007)’s study also revealed similar findings to other studies that have investigated gender and age and moral judgment scores using the DIT-2. The predictive model was found to have a moderate effect size of 0.34 (Cooper Schwarz, 2007, p.604). However, the total student sample size was small, which might have limited the study’s generalizability to broader college student population. In addition, various factors were not controlled including the student’s areas of study and repeat offenders of the school’s judicial code.

Two recent studies using multi-institution, longitudinal data on college impact (curricular and co-curricular activities) revealed that college attendance has a positive effect on moral reasoning. Mayhew, Seifert, and Pascarella (2010, 2012), studied college attendance and the impact on moral development on first-year college students using a
pretest-posttest research design. Using Kohlberg’s theory of moral development (Kohlberg, 1969, 1975) as the contextual framework, both studies examined the cognitive strategies that students used when faced with a moral dilemma using the DIT-2. The Mayhew et al. (2010)’s study investigated the relationship between student’s moral development trajectory and student’s “course-taking behavior, educational practices and co-curricular experiences” (p.359). The results of their study conducted in 2010 found that college going affects first-year student moral development and informs this study as a positive relationship between meaningful interaction with faculty and higher levels of moral reasoning development was determined.

Mayhew, Seifert, and Pascarella’s study conducted in 2012 used the DIT-2 to assess first-year students’ reasoning patterns and classified them into one of Kohlberg’s moral development stages and then further consolidated or in transition within that stage. The study examined whether course selection/preference and co-curricular activities affect moral reasoning when controlling for several pre-college covariates including college entrance exams, gender, race, political views, and cognition motivation. The results of Mayhew et al (2012)’s study found that college attendance impacted first-year student moral development more profoundly for students who were determined to be in the transition stage of moral development as opposed to the consolidation stage.

Turrentine, Esposito, Young, and Ostroth (2012) measured educational gains of 103 senior students who participated in co-curricular experiences over four years and found significant differences in educational gains compared to peers who did not participate in co-curricular experiences. Students were found to have deeper sense of ethnic diversity, deepened spirituality, and satisfaction with college experience. Moral
development was not measured, but several of the educational gains that were found to have been influenced by curricular activities are aligned with cognitive development principles associated with moral development such as ethnic awareness, maturity and competence (Kohlberg, 1976, Kuh, 1995; Kuh, et al, 2008). Given the evidence that cognitive development is linked to moral development, studies that show a relationship between co-curricular activities and cognitive development hypothetically and consequently may lead to moral development.

However, the evidence on college student involvement in curricular and co-curricular activities measured exclusively for moral judgment objectives is very limited. Student involvement studies generally report findings on retention, persistence and enrollment in graduate programs (Astin, 1977, 1993; Astin & Sax, 1998; Evans, et al., 1998; Gurin, et al, 2002; Kuh, 1993, 1995; Kuh et al., 2008). Such lack of studies on college student involvement warrants further studies on the relationship of student involvement and moral development.

**Co-Curricular Experience**

**Greek life.** There is a significant amount of empirical research on the student involvement in Greek life and the relationship with moral development. Greek life is generally considered to be a social co-curricular activity. Studies on Greek life involvement have demonstrated a positive relationship with persistence and retention (King & Mayhew, 2004; McCabe & Bowers, 1996; Pascarella & Terenzini, 1999; Storch, 2002). Research has also shown that students who participate in social co-curricular activities may earn lower grades and have lower moral development (Cohen, 1982; Derryberra & Thoma, 2000; Kilgannon & Erwin, 1992; Kirkuliet, 1994; McCabe &
Bowers, 1996; McCabe, Trevino & Butterfield, 1997; Pascarella & Terenzini, 1999; Storch, 2002).

Studies in higher education consistently demonstrate that peer influence is one of the most influential relationships on a college student. According to social norms theory, people maintain behavior consistent with peer descriptive norms, (Astin, 1977, 1993, 1996; Hard et al., 2006). This may explain some of the consistent research findings of lower moral development among Greek members than non-Greek members. Greek life is often associated with parties, underage drinking and delinquent behavior that can have negative effects on cognitive-moral reasoning and the development of critical thinking skills (Pascarella, Edison, Witt et al., 1996; Pascarella, Flowers, & Whitt, 1999).

Pascarella (1996) found that Greek men have on average a 27% lower mean in cognitive skills than non-Greek men. This finding informs the present study that men who participate in Greek life and participate in this study are likely to have significantly lower levels of moral judgment than non-Greek men. The same research study did not find significant difference in cognitive reasoning skills between Greek and non-Greek women. It is believed that the level of peer interaction, density of friendship and loyalty to the group (fraternity or sorority) is consistent with descriptive social norming (what members of a group actually do) and may explain the lower levels of moral judgment associated with Greek life.

**Greek life leadership.** As discussed above, previous studies on student participation in Greek life have shown a negative relationship with moral development. However, no study was found that looks at whether Greek life leadership may moderate the relation of Greek life involvement to moral development. Students who engage in
Greek life have the opportunity to take leadership positions within their designated fraternity or sorority. Students are elected by their Greek peers to represent the interests of the organization on campus, locally and sometimes national levels. Responsibilities may include organizing philanthropic activities such as fund-raising and/or volunteering in various capacities at charity events.

Individuals who participate in Greek life and hold leadership positions for their fraternity or sorority may report higher levels of moral development than individuals in Greek life who do not have a leadership position. This may be a result of the specific task or experience necessary to fulfill the responsibilities of that role and can be associated with higher order reasoning skills. Some of those tasks may include representing the interests of others over self-interests, upholding rules, authoritative processes and obligations, role-taking, and taking the perspective of others into account when formulating decisions. These actions may stimulate the psychological process of changes in cognitive structure that occurs when an individual internally reorganizes thought patterns based on experiences and interactions with diverse environmental stimuli that are theorized to increase moral development (Kohlberg, 1969, 1971, 1976). This study will look for a relationship between Greek life leadership and moral development.

**Student government association.** Students who participate in student government (academic enhancement) are often exposed to the types of moral dilemmas that would challenge reasoning skills and thus increase cognitive development. Students who participate in student government are often members of judicial boards and are expected to sit on hearings of student academic integrity and disciplinary cases involving their peers. This experience provides an opportunity for reflective judgment consistent
with the Developmental Instruction Model (DIM). This model is an instructional design characterized by four variables of structure, diversity, experiential learning and personalism created by Knefelkamp (1984) and grounded in Astin’s student impact model.

The diversity of the DIM employs both quantitative and qualitative dimensions to various learning experiences consistent with student government participation. Often students are faced with balancing judgment of delinquent behavior with mitigating circumstances while upholding the rights and responsibilities in the student handbook. The personal aspect of this learning experience is a student specific outcome that targets a comprehensive and responsive learning environment enriched through interaction with the material and the environment. It is predicted that given the level of psychological and emotional energy (Astin, 1993) required for this position, student participation on college hearing boards and student government organizations would be highly correlated with higher principled reasoning levels.

**Experiential Learning and Moral Development**

Moral development has been studied as a hierarchical progression of value-based practices based on cultural norms, experiences and shifting ones understanding based on tacit and explicit knowledge acquisition (Kohlberg, 1969, 1972, 1976; Rest, 1979). There is evidence revealing the positive relationship of formal education on moral judgment and reasoning skills (Berger & Millem, 2000; King & Mayhew, 2004; Mayhew, 2012; Mayhew & Engberg, 2010; Pascarella, 1997; Pascarella & Terenzini, 1991; Rest & Deemer, 1986; Rest & Narvaez, 1991). However these studies did not examine experiential learning opportunities on moral development, whose results help support the
theory that experiential learning opportunities outside of the classroom may have similar results. Research projects would be considered an experiential learning opportunity as it usually take place outside of the classroom and can provide a fertile learning environment with prolonged intellectual stimulation that endorses critical assumptions, evaluation of perspectives and mutual involvement of the learning community (Rest & Thoma, 1985).

Evidence of the impact on student learning through active learning has been studied and lends credibility to the basis of this study (Braxton, Millem, & Sullivan, 2000).

Perhaps the best method to predict specific active learning experiences on cognitive-moral development is to evaluate the developmental components of various models of knowledge acquisition, judgment and reasoning development. The Model of Epistemology and The Reflective Judgment Model (RJM), which was developed by King and Kitchener (1994) based on John Dewey’s research on judgment and cognition are useful in providing support for stimulated development on cognitive rationale on learning. The Model of Epistemology (Baxter Magolda, 1999), characterized by levels of cognitive awareness, has been found to explain the complex reasoning processes and how individuals assess knowledge differently. The RJM references reflective thinking and the influence on the education and knowledge acquisition, with Piaget’s assumptions, findings and theories on stage related development in adolescents and Kohlberg’s moral development model (Evans et al., 2005). The RJM provides further support for this study by providing a framework to support experiential and inquiry based learning through integrating an undergraduate research component (Boyer, 1999). These pedagogical theories on knowledge acquisition support the premise of this study.
Theories on reasoning and judgment development have shown to predict the best methods for student instruction. The RJM provides a framework to study how individuals evaluate a dilemma and their justification for their beliefs. The RJM establishes another theory about how people rationalize how they know what they know and the cognitive process involved in resolving dilemmas in the face of uncertainty. Reflective judgments are meant to be utilized when there is uncertainty about a solution; reasoning is to be based on epistemological and meta-ethical assumptions about the value of the resolution. The RJM supplies further support for the proposed study identifying positive cognitive and principled if not moral reasoning outcomes based on experiential learning practices. The model allows for development of reflective judgment over time as educational activities help improve reasoning of ill-structured problems such as what students may encounter when they participate in research projects.

**Internship.** There is very little empirical evidence on the impact of student internship involvement and moral development. Internship participation is considered to be an experiential learning activity and can be defined as an off-campus learning experience. For the purposes of developing the criteria for this independent variable, literature on off-campus learning experiences is combined with the off-campus employment research and its impact on moral development.

Internship activities provide students with an opportunity to engage in a professional setting (often field related) and interact with socially diverse peers outside of their college setting. Studies that have been conducted on off campus learning experiences and the correlation with moral development have demonstrated gains in principled reasoning that are 1.7 times higher than the corresponding gains of student
counterparts who did not have the internship experience (McNeel, 1994; Pascarella & Terenzini, 2005). The McNeel study is consistent with the literature that supports student exposure to divergent intellectual and social perspectives impact student’s principled reasoning skills (Derryberry & Thoma, 2000). It was reported by Rykiel and Berger (1998), that time off campus negatively influences community and civic engagement as there seems to be less time to devote to those areas that have been shown to correlate with higher principled reasoning scores. Therefore, internship as an independent variable may provide mixed results depending on the amount of time spent on the internship.

**Faculty mentored research projects.** The literature on student involvement in faculty mentored research projects is limited. The studies on college student impact of undergraduate participation in research programs have shown findings in greater college persistence, degree completion, graduate school enrollment and degree aspirations (Astin, 1993; Nagda, Gregerman, Jonides, von Hippel, & Lerner, 1998; Pascarella & Terenzini, 2005; Sax, 1994). Participation in a faculty mentored research project would provide for interaction with faculty over a period of time. Students who may report that they have engaged in a faculty mentored research project, will be exposed to various dimensions of learning that are structured to involve higher level cognitive skills and reflection consistent with the DIM, which can impact principle moral reasoning.

The effect of faculty interaction outside of the classroom has been found to significantly impact the degree to which students become engaged in learning. This level of engagement has found a relationship with student cognitive gains in critical thinking and formal reasoning and lends further validity for this study (Kuh, 2008; Pascarella & Terenzini, 2005; Tinto, 2000). Studies have found that students who interacted with
faculty showed moral development levels that were three time higher than their peers who had no faculty interaction (McNeel, 1994). This study will also measure whether a relationship exists between undergraduate participation in research and experiential learning opportunities with faculty interaction outside of the classroom and moral development. The results may provide validation for further inquiry into the impact of experiential learning opportunities on cognitive moral development.

Research projects when viewed as experiential learning opportunities may provide various opportunities for moral growth. Active or experiential learning including guided reflection opportunities, meaningful faculty interaction and diverse peer interactions have been associated with gains in moral development (Hurtado, Mayhew, & Engberg, 2003; Mayhew & King, 2008; McNeel, 1994). Therefore, it is anticipated that student participation in a faculty mentored research projects (considered an experiential learning activity) will be a factor in increased principled reasoning skills. A student researcher on a faculty mentored project may parallel with the contextual framework for cognitive development such as scientific problem-solving, metacognition, motivation to seek out alternative explanations for results requiring higher order critical thinking skills and may challenge students with ethical dilemmas (King, 2009).

Some research projects may also stimulate emotions of empathy, altruism and even spirituality, which are constructs that have been associated with character and cognitive development. Activities aimed at developing moral reasoning through education under the guidance of a mentor should synthesize the following five areas of development for optimal results: (1) establish a caring relationship (Baumeister & Leary, 1995); (2) develop a climate where ethics are emphasized through a culture of acceptable
behavior that supports autonomy, competence and fosters motivation (Deci & Ryan, 1985); (3) Recognizing ethical skills development through “novice to expert pedagogy” (Narvaez, 2006); (4) guidance to mentee to develop self-regulation patterns of behavior that unite ethics with excellence (Zimmerman, Bonner, & Kovach, 2000 in Narvaez, 2010); (5) establish a sense of community where the culture acknowledges and is conducive for ethical education where all community members flourish under the same standards (Broffenbrenner, 1979). Based on the five above mentioned principles, the holistic experience of experiential participation may advance moral development in college students.

Student Characteristics on Moral Development

The relation of student characteristics to moral and cognitive development has been studied over the past 40 years. Studies on gender and level of college education with moral development measured using the DIT-2 (Rest, et al., 1999) have shown the most consistent findings as discussed below.

**Sex.** Sex differences have been considered an important student demographic for understanding the association between college experiences and moral development. Sex has shown to account for approximately less than .5% of variance in moral development measured by the DIT (Rest, 1994). Research investigating moral development has consistently found that women use more sophisticated reasoning strategies (Gilligan, 1988) than men resulting in higher moral judgment scores on tests (Mayhew, Seifert, & Pascarella, 2010). Of 43 studies looking at sex difference in moral development, 24 found that there was a significant relationship between gender and moral development, yet 17 found no difference and two studies found a higher correlation for males (Mayhew, et al.,
2010). Given this mixed finding in the literature, sex should be an important student characteristic to be examined in the relation to moral development.

In addition, the literature on moral development has been criticized by feminist theorists as problematic. Gilligan’s critique of Kohlberg’s (1969) theory indicts his model of moral development as gender-biased and neglects factors of moral emotion and volition (Gilligan, 1988). Kohlberg (1983) wrote that women would be unable to attain the same level of moral development as their male counterparts even though he generalized his findings to include both men and women (Gilligan, 1977, 1993). Given Gilligan’s critique of Kohlberg’s theory of moral development, and empirical findings indicating that gender may impact the process and outcomes of moral development, sex is included as a descriptive variable in the current study. It is predicted that females will have higher moral development than their male counterparts who indicate similar college involvement and participate in similar experiences.

**Academic level and Age.** Student variables that have demonstrated the strongest relationship with moral development are chronological age and years of education. Age and level of education account for 30 to 50 percent of the variance in DIT scores, with a bivariate correlation of .52 on average (Rest, 1979, 1986, 1994; Thoma, 1986). Research conducted on moral development and undergraduate divisional levels have found a moderating effect of age in that freshmen showed the lowest levels yet seniors had the highest levels, with small mean difference than junior level (Rest, 1979, 1986; Rest & Deemer, 1986). Though level of education has traditionally shown to be a stronger correlate with moral development than age, it is important to recognize that the age of a potential college student has a very large range and should be acknowledged as a possible
indicator for outlier responses (McCabe & Trevino, 1997; Rest & Narvaez, 2001; Rest, et al., 1999). In the current study, age of the participant was only asked in order to control for non-traditional aged students.

**Summary**

This chapter has established the conceptual framework guiding this study with review of the theoretical literature and empirical research conducted over the past 60 years on college students and the impact of college experiences on their moral development. The three major contextual areas presented here as guiding theories for the current study are theories on cognitive developmental approach to moral reasoning (Kohlberg, Rest, & Piaget), experiential and inquiry based education affecting academic integrity and college student development. The contextual model that informs this study and provides evidence of the psychological and physical impact on college student’s development through college involvement is Astin’s College Impact Model (Astin, 1984). The Developmental Instruction Model (Knefelkamp & Widdick, 1984), The Model of Epistemological Reflection (Baxter Magolda, 1999), and The Reflective Judgment Model (King & Kitchener, 1994), provide the theoretical support for the connection between student involvement and cognitive development. The models on cognition and knowledge acquisition support the theory of student experiences and the impact on developing moral schemas which Kohlberg theorized is the process by which individuals acquire higher levels of moral development (Kohlberg, 1969).

Though much of the literature has focused either on moral development or academic interventions, few have specifically examined student engagement in co-curricular activities and the impact on principled moral reasoning and moral
development. The review of the literature on college student moral development has found empirical evidence that supports a relationship between college experiences and the development of moral judgment and reasoning. There are several empirical studies that have conducted research that have included broad college experiences and the ways that these experiences promote increases in stages of moral development through curricular enhancement and student activities (Mayhew, Seifert, & Pascarella, 2010; Rest, 1994; Rest & Narvaez, 1991; Wilson, Rest, Boldizar, & Deemer, 1992). Empirical links have been established between “facets of cognition, such as academic ability and motivation and moral reasoning development” (Mayhew, et al., 2010, p.382).

Extensive theory and limited evidence exist to support co-curricular college involvement and its effect on students’ cognitive and moral development (Boss, 1994; Bouhmama, 1988; King, Kitchener, Wood, 1985; Pascarella & Terenzini, 2005). As such, a study on specific experiential learning experiences on moral development such as student involvement in faculty mentored research projects could not be located; this study may be one of the first to specifically measure this activity and the relationship with moral judgment. Implications of this study provide groundwork for further inquiry into curricular and co-curricular conditions that may help explain practices responsible for facilitating moral development in students.

This study was developed in response to the growing crisis of academic dishonesty in higher education and the need to provide greater opportunities for cognitive and moral development skills that will support greater moral reasoning. In particular, the focus of this study relies on the educational and constructive developmental value of the student participation in co-curricular activities, level of involvement as well as the value
of the mentor-student relationship with faculty and student affairs professionals. The relationship and combination of these values on student development provides a fertile ground for cognitive development, thus supporting Kohlberg’s theory on moral development, which was based on Piagetian cognitive elements (Kohlberg, 1969). The curricular experience variable is grounded in Astin’s theory of student involvement and has been selected based on two criteria: a) the evidence in the research literature; and b) the element of cognitive development that may intuitively inform about character, reasoning, decision making, meta-cognition, role playing and motivation to think critically.
Chapter 3: Method

This study was designed to determine if student’s background characteristics and co-curricular college experiences are related to students’ moral development. Moral development is measured by the moral judgment score obtained through student responses to three dilemmas taken from the Defining Issues Test-2 (DIT-2). Research questions described in chapter 1 were examined using a cross-sectional and correlational data, on which a sample of college students was surveyed. Variables of interest were student background characteristics, type of student co-curricular experiences, level of student co-curricular experiences, and moral judgment. Research design, population and sample, sampling method, data collection, variables and measures, and data analysis used in the present study are discussed below.

Research Design

The current research was a cross-sectional and correlational in that quantitative data gathered from student responses to an on-line survey were explored. The advantages of using an on-line survey for data collection are (1) it protects the anonymity of the respondent, (2) electronic distribution allows for an increase of student participation that is wide ranging, and (3) student convenience. Students can open the survey at any time and can save their responses and return to the survey at their discretion. Therefore, due to the aforementioned advantages, an electronic survey was used to gather anonymous information from students.

Population and Sample

The population for this study entails undergraduate students who attend an accredited, 4-year, research institution in the United States of America. Research
institutions in the U.S. generally offer opportunities of co-curricular experiences to the undergraduate population in student government association, Greek life, internships, and faculty mentored research.

The sample was recruited from all full-time undergraduate students enrolled in the spring of 2016, at a mid-sized private Research I institution. Student enrollment at this institution by gender is 50% male and 50% female. Ethnic classification by enrollment is 44% White, 25% Hispanic, 11% Asian/Pacific Islander, 8% Black 0% American Indian and 3% identified as multiple ethnic identity (Fact Book, 2015). The University has over 112 bachelors programs with over $353 million dollars in research and sponsored program funding. The eligibility of the individuals in the sample includes: (1) students must be over the age of 18, (2) have access to the Internet, and (3) agree to partake in the survey by clicking the “I agree” button.

**Sampling Procedure**

Convenience sampling of the undergraduate students at an institution, which include freshmen through seniors, was utilized in order to maximize the likelihood of recruiting more students who actively participate in co-curricular programs and activities. The Registrar’s office at the target institution identifies student’s academic level by the number of credits earned. A freshman student has earned between 0 and 29 credits; a sophomore has earned 30 to 59 credits; a junior student has earned 60 to 89 credits; a senior student has earned 90 credits or more. Based on the student academic levels, the university’s office of the registrar has identified that there are 2,202 freshman, 2,590 sophomores, 2,571 juniors and 3,248 seniors enrolled in the spring semester of 2016.
These 10,411 students received the survey invitation via email and 194 responses to the online survey were used in this study.

**Priori Power Analysis**

The minimum required sample size needed to detect the significance of the effect of focal variable at the statistical power of .80 was calculated by a priori power analysis using GPower (Erdfelder, Faul, & Buchner, 1996) assuming an alpha level of .05 and, small effect size .15. The number of independent variables in the study was determined to be 22 (sex with 2 dummy variables, academic level with 3 dummy variables, age with 1 dummy variable, the participation variables of student government participation with 9 dummy variables, Greek Life with 2 dummy variables, Greek Life leadership with 2 dummy variables, student internship with 2 dummy variables and faculty mentored research with 2 dummy variables, giving a total of 23 predictor variables). Results from the a priori power analysis using GPOWER indicates that a sample size of 157 is required to detect at least one significant mean difference using the ANOVA model that predict the relationship between student co-curricular experience and moral development levels (appendix D).

**Data Collection**

Upon the full approval of the current research by the Institutional Review Board (IRB) of the target institution (see appendix E for IRB letter) the survey had been electronically mailed to all nine of the undergraduate advising offices at the institution requesting that the undergraduate dean forward the email to the undergraduate student listserv, which would include all freshmen, sophomore, junior and senior undergraduates in the spring of 2016 who were enrolled at the institution as full time students. In the
School of Education and Human Development, 10 student listservs were used to disburse the student survey link. The College of Arts & Sciences, School of Communications, the Marine School, the Music school, the Nursing school, and the Business school confirmed that they used their undergraduate list-serv for disbursement to their undergraduate population.

Students who received the e-mail invitation to the survey would read that the survey was as a study on contemporary issues that may concern college students today and asked for their opinions and judgment. The students were invited to click on the link provided in the body of the e-mail that re-directed them to the introductory page. The introductory page contained an IRB approved explanation regarding the purpose for the study, as well as a check-box for the student to indicate that he or she had read the introduction to the survey and agreed to participate (See Appendix G). Students who participated in the survey were ensured of their anonymity as the survey link did not provide identifiable personal information other than IP computer address information; the survey was administered through the web based warehouse: Qualtrics survey account.

A follow up e-mail was sent to the advising offices requesting that a reminder email be sent to all students six days after the initial e-mail survey was sent out. In addition, a number of individual faculty members who learned of the research project allowed the survey to be sent directly to their class rosters (a total of 10 different courses), allowing for an increase in student response rates. The follow-up email reminder yielded an additional 24 survey submissions, which was determined to be minimal. The minimum number of responses (157 according to the a priori analysis
discussed below) had been met after five days of the initial survey distribution. A total of 170 surveys had been collected after six days of the survey distribution.

It was determined on the eighth day after the initial e-mail invitation and a follow-up invitation had been sent, to close the survey. It is partly due to lack of the response rate after the follow up email reminder, which resulted in an additional 24 survey submissions and no additional activity afterwards. In addition, the decision to close the survey after eight days was made due to the fact that the spring semester had ended and students were already finished with final exams and heading off to their summer destinations. It seemed unlikely that students would be opening emails and responding to the survey as their summer break was underway. The power had been met with 194 responses as the a priori power analysis determined that 157 responses was the minimum sample size required.

**Independent Variables**

Independent variables were (1) student background characteristics (sex, academic level, and age) – 3 items, (2) type of co-curricular experiences (student government association [SGA], Greek life, Greek life leadership, structured internship, and faculty mentored research) – 5 items, and (3) level of co-curricular experiences (student government association [SGA], Greek life, Greek life leadership, structured internship, and faculty mentored research) – 7 items.

**Student background characteristics.** Participants were asked to provide (1) their sex (male, female, or intra-sexual), (2) their academic level (freshman, sophomore, junior, or senior), and (3) their age group (18 to 24 year of age or older than 24 years of age).
Type and level of co-curricular experiences. Students were asked if they had participated in any of the following 5 co-curricular experiences. The possible number of co-curricular experiences that students could report would range from 0 to 5 experiences. First, students who responded that they were members of Student Government Association (SGA) were asked to identify which position they held and had 1 of 8 responses to choose (Judicial branch member [Supreme Court], Executive board member, Legislature/senator, Agency member, Honor Council member, Officer of the SGA, Member at large). Students who reported that they had participated in SGA were then asked how long that they had participated in SGA (1 semester, 2 semesters, or more than 2 semesters) in order to obtain the level of involvement.

Second, students were asked if they were a member of Greek life. If the participant responded yes, then they were asked to provide length of time that they had been a member. Answers could range from 1 to 8 semesters. Upon evaluation of the data, level of involvement for Greek life was assessed in the following manner: low involvement (1, 2 semesters), and high (3 or more semesters).

Third, students who responded yes, that they were members of Greek life, were then asked if they had been a leader in Greek life. If they had been a Greek leader, the student was then asked if to provide the length of time that they had been a Greek leader. Greek leadership involvement was assessed in the following manner: low (1, 2 semesters), and high (3 or more semesters).

Fourth, students were asked if they had participated in a structured internship. If the participant responded yes, then they were asked to provide length of time that they had worked at their internship. Answers should range from 1 to 40 hours per week, but
could go higher. Upon evaluation of the data, level of involvement in a structured internship was assessed in the following manner: low involvement (less than 20 hours per week), medium (21 to 40 hours per week), and high (more than 40 hours per week).

Fifth, participants were asked if they had participated in a faculty mentored research project. If the participant responded yes, then they were asked to provide length of time that they had worked on the research project. Answers should range from 1 to 40 hours per week, but could go higher. Upon evaluation of the data, level of involvement in a faculty mentored research project was assessed in the following manner: low involvement (1 to 9 hours per week), medium (10 to 20 hours per week), and high (more than 20 hours per week).

**Dependent Variable**

The dependent variable for this study was moral development and was represented by the N2 index. The score is derived from a ranking and rating system of responses to a series of questions on the Defining Issues Test-2 (DIT-2) (Rest, et al., 1999) and represents the degree of importance that an individual considers when making judgments about the presented dilemma (Rest, 1979). The N2 index represents the level of moral development, which is on a continuous scale that uses a composite score between 0 and 95, but can go negative (see appendix C). It represents the consolidation of an individual’s schema and information processing that assess’ the specific moral developmental stage of the individual based on the principles of moral reasoning that they use most to resolve the dilemma.

A high N2 score reflects a high level of moral reasoning and decision making and is associated with a high moral development level. Studies that have used the DIT-2 have
found that junior high students (12 and 13 year old individuals), reveal N2 scores in the 20’s; seniors in high school average scores in the 30’s; undergraduate college students average scores in the 40’s with graduate level students averaging in the 50’s and higher depending on the field of study, (Rest, Narvaez, Bebeau, & Thoma, 1999). Graduate level students studying in the disciplines of moral philosophy, ethics and/or political science, tend to have the highest scores on the DIT-2 than any other group, with scores in the mid-60s (Derryberra & Thoma, 2000; Rest, 1999).

**The DIT and DIT-2.** The DIT and DIT-2 are quantitative assessments based on Kohlberg’s stage theory of moral development. Rest (1979) constructed the DIT as a quantitative measure that was theoretically based on the Moral Judgment-Index (MJI), a qualitative assessment developed by Kohlberg (1969). Both of these assessments explore differences in individual moral reasoning (Kohlberg, 1969; Rest, 1979). The DIT-2 assesses levels of moral development through identifying moral schemas that individuals use to reason through moral dilemmas (Rest, 1979; 1986). The schemas are based on perceived general knowledge that an individual has obtained through cognitive developmental structure derived from memory and experiences (Rest, 1979; Rest, Cooper, Coder, Mesanz, & Anderson, 1974).

Participant responses are assessed around three schemas/stages of moral development: 5A, 5B, and 6 (Rest & Narvaez, 1998). These three schemas/stages represent post-conventional reasoning and are used to derive the participant’s N2 score (moral development). The DIT demonstrates that subjects often utilize different stage reasoning in response to various items on the test. The three theoretical levels of moral judgment developed by Kohlberg are: pre-conventional, (level 1), with stages 1 and 2
organized around principles of personal interest; conventional, (level 2), with stages 3, 4, and 4a organized around principles of maintaining norms; and post conventional, (level 3), with stages 5, 5a, 5b and 6 organized around principles of universality. Rest arranged the levels around Schemas to avoid confusion and named the three levels Personal interest, Maintaining Norms, and Post-conventional (Rest, Narvaez, Thoma, et al., 1999).

The DIT-2 consists of five scenarios each with a moral dilemma and asks the participant to choose a course of action, and then rate and rank his or her responses. This study will use a shortened version. Permission to shorten the instrument was obtained from Dr. Thoma at the Ethical Study Program at the University of Alabama, Tuscaloosa (Appendix B). The three dilemmas that were used in this study are identified as dilemmas 1-Famine, (Father must decide if he should steal food for his starving family from a wealthy businessman); Dilemma 2- Reporter (political reporter must decide if she should expose a politician’s past indiscretions even though she believes he is the best candidate); Dilemma 4-Cancer Patient (should a nurse administer poison to a dying cancer patient who is suffering and requests the poison).

The participant was instructed to read each dilemma which was be followed by a series of questions as to what should be done to resolve or respond to the dilemma. The participant was then asked to rate the level of importance that 12 listed statements/issues may have influenced his or her decision to select the course of action related to the dilemma using a 5-item Likert scale response. The possible choices are “Great, Much, Some, Little or No” (DIT-2, Rest et al, 2000). Respondent then ranked their responses and lists their top four responses per level of importance as “Most important, 2nd Most Important, 3rd Most Important and 4th Most Important”. The rating and ranking of
individual responses was used to derive the N2 index (moral development) representing the dependent variable in this study.

For the purpose of this study, the scores from the DIT-2 were used to represent the moral development level of the participant using the N2 index. According to Rest et al., (1999) the N2 index is based on the degree to which a person’s moral judgment “reaches the principled or post-conventional thinking” (p.655). In cases where a subject cannot be stage-typed it will be interpreted to mean that the subject has not committed to any one prevalent level of moral judgment. In these cases, the DIT-2 will not assign a stage/level for the individual.

Normative data for the DIT has been generated from over 40,000 DIT assessments, scored between 1989 and 1999 (Evens, 1995). The DIT has demonstrated a positive correlation measuring moral judgment with the MJI (Kohlberg, 1969), of .68, (Rest, Cooper, Coder, Masanz, and Anderson, 1974). Test-retest reliability for the DIT-2 ranges from the upper .70s to low .80’s and positively correlates with the DIT (r = .79) (Rest & Narvaez, 1998). The regulations for permission of use regarding the DIT-2 required that questions involving demographics of race, political ideology, country of origin and first language remain in the questionnaire even though these factors were not measured in this study. Permission to delete questions of race, political ideology, country of origin and first language for this study was requested and granted (Appendix A).

**Scoring of the DIT-2.** The DIT-2 is considered intellectual property of the Ethical Study Program at the University of Alabama, Tuscaloosa at the Center for the Study of Ethical Development and under the administration of Professor Thoma. Payment to the Center must be received within two weeks of receiving the survey
responses. The price for scoring 200 DIT-2 exams was $226.00. Quantitative data was directly downloaded through SPSS software and scored by the Ethical Study program. The scoring algorithm of the DIT-2 using participant rating and ranking responses to items and assessing a value for moral judgment is not made available to the public.

**Psychometrics of the DIT-2.** Access to item level scores was not provided by the Ethical Study office, responsible for scoring the DIT-2. Therefore it was not possible to calculate the Cronbach’s alpha. Studies that have used the all five of the dilemmas in the DIT-2 for measuring moral development have reported the internal consistency reliability of the DIT-2 N2 score correlated between .77 to .81 (Rest, Narvaez, Thoma, & Bebeau, 1999). Studies that have used the shortened form of the DIT-2 computed the correlation of moral comprehension with the N2 index as .55, .57, .66, and .50 (p < .001) (Rest, Thoma, Narvaez, & Bebeau, 1999). This study used the shortened form of the DIT-2.

**Data Screening**

As a preliminary analysis, survey responses were first assessed for accuracy, unreasonable responses and missing data. Of the 11 students who responded that they had participated in Student Government Association (SGA), only 8 students provided the amount of time that they were involved in SGA. There were 16 missing responses for this variable out of the total sample responses. There were 18 missing responses to the Greek life variable. There were 17 missing responses to the structured internship question. Two scores for level of internship involvement were discarded as an unreasonable response of 100 and 180 hours per week. There were 5 students who reported their hours per semester spent on the research project inaccurately (noting a date when they began their project) and therefore the level of involvement would not be calculated for those students. There
were 18 missing responses to the faculty mentored research question. Then, descriptive statistics and frequency tables for each variable were examined.

**Data Analyses**

Three sets of statistical analyses were performed to answer research questions posited to the study. First, a series of independent sample *t*-test or Analysis of Variance (ANOVA) were conducted to examine the relationship between student background variables and the N2 score (Research Question 1). Second, a series of independent sample *t*-tests were performed to examine whether students’ co-curricular involvement in student government association, Greek life, Greek life leadership, internship or faculty mentored research and moral judgment scores influence students’ moral judgment (Research Question 2). Third, a number of independent sample *t*-tests or ANOVA was used to analyze how student’s moral judgment (N2 index) is related to student’s level of co-curricular involvement (Research Question 3). Lastly, a general linear model was used to look for any factor that had a unique effect on student’s moral judgment when other variables were controlled. In the final model, only the significant factors that showed a bivariate relationship with the N2 score was included for the sake of parsimony.
Chapter 4: Results

Research questions were answered by analyzing survey responses using the Statistical Package for the Social Sciences (SPSS) (IBM Corp., 2013). First, frequency tables for student background characteristics were created. Second, descriptive statistics of moral development (N2 index) for all participants were computed. Then, additional descriptive statistics of N2 scores were calculated, separately by student characteristics. Third, a series of independent samples t-test or Analysis of Variance (ANOVA) were performed to see whether N2 scores were different depending on student characteristics including age, sex, and academic levels. Fourth, a set of independent samples t-tests were conducted to examine the first hypothesis that students’ co-curricular experiences including (1) Student Government Association (SGA), (2) Greek life, (3) Greek life leadership, (4) Internship, and (5) Faculty mentored research (FMR), yield variation in N2 scores. Lastly, a series of ANOVA were conducted to explore the second research hypothesis that level of student involvement leads to differences in student’s N2-scores. Results from the statistical results are discussed below.

Student Characteristics

Below, a summary of student demographic information, frequency of student co-curricular experiences, the level of co-curricular involvement, and moral judgment scores are discussed.

Student background. Out of a total of 194 students who participated in the survey, 176 students reported their sex including 34% (n = 59) were males, 64% (n = 113) were females, and 2% (n = 4) were intra-sexual. Students were asked to identify their age into one of two groups, 18 to 24 years of age (traditional aged students) and
older than 24 years of age. The majority of the respondents, 96% \((n = 168\) out of 176) were between 18 and 24 years old, and 4% \((n = 8)\) of the participants who identified in the older than 24 age group. Out of 194 respondents, 29 identified as freshman (15%), 40 were sophomores (21%), 50 were juniors (26%), and 57 were seniors (30%).

As shown in Table 2, of the 29 freshmen students who responded to the survey, 31% \((n = 9)\) were male, 66% \((n = 19)\) were female, and 3% \((n = 1)\) were intra-sexual. Of the 40 sophomores who responded to the survey, 33% \((n = 13)\) were male, 65% \((n = 26)\) were female and 2% \((n = 1)\) were intra-sexual. Of the 50 juniors who responded, 28% \((n = 16)\) were male, 70% \((n = 33)\) were female, 2% \((n = 1)\) were intra-sexual. Of the 57 seniors who responded, 37% \((n = 21)\) were males, 61% \((n = 35)\) were females, and 2% \((n = 1)\) were intra-sexual.

**Frequencies by co-curricular experiences.** Table 3 displays the frequency of participants for their co-curricular experiences. Of 194 survey respondents, 5% \((n = 11)\) students responded that they were members of the student government association (SGA). Of those 11 students, 3 are male, 6 are female and 2 are intra-sexual. Of the 194 survey respondents 22% \((n = 41)\) responded that they were members of Greek life (11 male, 28 females, and 2 intra-sexual). Of those 41 students who responded that they were members of Greek life, 73% \((n = 30)\) students held positions of leadership within their fraternity or sorority (10 males, 19 females, and 1 intra-sexual). Of the 194 survey responses, 28% of the students \((n = 53)\) reported that they participated in a structured internship. Of the 53 students who reported that they had a structured internship, 21 were males, 28 females and 1 intra-sexual.
Faculty mentored research projects reported the highest response rate of 32% (n = 60). Female students were 3 times more likely than male students to be involved in faculty mentored research (14 males, 44 females and 1 intra-sexual). Female students were 1.5 times more likely to be involved in co-curricular experiences than male students (n = 56 female vs. n = 34 male) and 14 times more likely to be involved than intra-sexual students.

The academic level of the participants revealed higher levels of involvement beyond the freshman year. Of the 29 freshman who responded to the survey, there were only 8 (3%) who reported that they participated in co-curricular experiences. The 57 seniors who responded to the survey reported 90 co-curricular experiences for their involvement. This number of reported experiences reflects that seniors have engaged in multiple co-curricular activities and surpass freshman involvement by 110%.

**Moral judgment.** The mean moral judgment (N2 score) for the sample (n = 193) was 25.22 with a SD of 14.36 (Min = -13.28, Max = 61.88). The N2 scores by type of co-curricular involvement were also calculated. First, students who participated in SGA (n = 31) had a mean N2 score of 21.44 (SD = 16.97). Second, students who participated in Greek life (n = 41) had a mean N2 score of 25.45 with a SD of 12.48, while students who held leadership positions in Greek life leadership (n = 30) had a mean N2 score of 24.67 (SD = 11.31). Third, students who reported that they participated in a structured internship (n = 53) had a mean N2 score of 23.88 with a SD of 14.61. Lastly, students who participated in a faculty mentored research project (n = 30) had a mean N2 score of 29.10 (SD = 14.92).
Student Background and Moral Judgment

As shown in Table 4, mean N2 scores were compared by student background variables (sex, academic levels, and age group).

Sex. 178 out of 194 participants reported information on sex and they were included in the analysis. There were 114 females, 60 males, and 4 participants who identified as intra-sexual or sexual orientation beyond a binary system. A one-way between-subject ANOVA was conducted to evaluate the relationship between sex and the level of moral judgment (N2 score). Result from Levene’s test suggests that the assumption for equality of variance was met ($F = 5.61, p = .34$). The main effect of sex was found to be statistically significant at the alpha level of .05 ($F_{(2,175)} = 5.61, p = .004, \eta^2_p = .06$). This result suggests that females were found to have a significantly higher level of moral judgment ($M = 28.14, SD = 14.72$) than male students ($M = 22.39, SD = 13.46$). Also, individuals identifying as intra-sexual had the lowest mean N2 score ($M = 10.13, SD = 14.69$).

Academic level. The average N2 score for freshmen ($n = 29$) was 19.77 ($SD = 15.04$) with scores ranging between 14.05 and 25.49. The average N2 score for sophomores ($n = 40$) was 28.15 ($SD = 12.98$) with scores ranging between 24.00 and 32.30. The average N2 score for juniors ($n = 50$) was 25.05 ($SD = 15.33$) with scores ranging 20.69 and 29.40. The average N2 score for seniors ($n = 57$) was 27.52 ($SD = 14.69$) with scores ranging between 23.62 and 31.42. The one-way between-subject ANOVA results showed no significant mean difference on moral judgment between four different academic levels of students ($F_{(3,172)} = .42, p = .74, \eta^2_p = .04$). Though it was not statistically significant, sophomore students had the highest N2 score.
Age. The variable for age was divided into two groups, those between 18 to 24 years of age and those older than 24 years of age. The independent samples *t*-test showed no statistical difference on N2 scores between students identified in the 18 to 24 years old age group (*M* = 26.06, *SD* = 14.67, *n* = 169) and those in the over 24 years of age group (*M* = 20.91, *SD* = 15.16, *n* = 9) with scores ranging between 9.26 and 32.56, (*t*(176) = 0.36, *p* = .31, 95% CI: -4.77, - 15.07).

Co-curricular Involvement and Moral Judgment

As can be seen in Table 5, the results comparing means on moral judgment (N2 score) by participant responses to co-curricular involvement (i.e., student government [SGA], Greek Life, Greek Life leadership, Internship, Faculty mentored research projects) using a series of independent samples *t*-test. The results from these statistical analyses answer research question one, which are discussed below.

**Student government association.** Result from Levene’s test suggests that the assumption for equality of variance between groups was met for student involvement in student government association, *F* = .05, *p* = .82. The independent samples *t*-test shows no statistical difference on N2 scores between students with SGA (*M* = 21.44, *SD* = 16.97, *n* = 11) and those without SGA (*M* = 26.08, *SD* = 14.55, *n* = 167), *t*(176) = -1.02, *p* = .31, 95% CI: -13.67, 4.39.

**Greek life.** Of the 194 responses to the survey, 41 participants responded that they are members of Greek life (21%) and that 135 students are not members (70%). Result from Levene’s test for equality of variances suggest assumption for equality of variance was not met for student involvement in Greek Life (*F* = 4.5, *p* = .04). Thus the degrees of freedom for the *t*-test was adjusted. The independent samples *t*-test shows that
no difference on N2 scores between students involved in Greek life ($M = 25.45$, $SD = 12.48$, $n = 41$) and those not involved in Greek life ($M = 26.02$, $SD = 15.42$, $n = 135$) was found ($t_{(80.52)} = -0.24$, $p = .80$, 95% CI: -5.27, 4.12).

**Greek life leadership.** Of the 41 students who responded that they were members of Greek life, 30 (73%) reported that they held leadership positions within their fraternity or sorority. Results from Levene’s test for equality of variances suggests that the assumption for equality of variance was not met ($F = 0.73$, $p = .40$). The independent samples $t$-test shows that no difference on N2 scores between students involved in Greek life leadership roles ($M = 24.67$, $SD = 11.31$, $n = 30$) and those not involved in Greek life leadership ($M = 26.88$, $SD = 15.11$, $n = 11$) was found ($t_{(40)} = -0.52$, $p = .61$, 95% CI: -10.82, 6.40).

**Internship.** There were 53 students (27%) out of the 194 respondents, who reported that they had participated in a structured internship. Result from Levene’s test for equality of variance suggests assumption for equality of variance was met for students completing structured internships ($F = 0.07$, $p = .79$). The independent samples $t$-test shows that no difference on N2 scores was found between students with internships ($M = 23.88$, $SD = 14.61$, $n = 53$) and those without internships ($M = 26.69$, $SD = 14.75$, $n = 124$), $t_{(176)} = -1.12$, $p = .25$, 95% CI: -7.57, 1.95.

**Faculty mentored research.** Result from Levene’s test for equality of variance suggests assumption for equality of variance was met for student involvement in faculty mentored research projects ($F = 0.18$, $p = .67$). The independent samples $t$-test shows that N2 scores were significantly different between students who worked on faculty mentored research projects and those who did not work on faculty mentored research projects ($t_{(174)}$
In particular, N2 score for students participating in faculty mentored research projects ($M = 29.10$, $SD = 14.92$, $n = 60$) were statistically higher than those students who did not participate in faculty mentored research projects ($M = 24.13$, $SD = 14.45$, $n = 116$).

**Level of Co-curricular Involvement and N2 Score**

As shown in Table 6, moral judgement scores (N2 score) by levels of co-curricular involvement (i.e., student government [SGA], Greek life, Greek life leadership, Internship, and Faculty mentored research projects) are displayed. Below, results from statistical analyses including independent samples $t$-test or ANOVA are discussed. Note, mean differences on N2 score by levels of involvement in SGA were not assessed due to the small number of student involvement ($n = 11$) in SGA.

**Greek life.** Result from Levene’s test suggests that the assumption for equality of variance was met for student involvement in Greek life ($F = .001$, $p = .98$). The level of involvement for Greek life was categorized as into two groups: (1) 1 or 2 semesters of involvement, which is labeled as low involvement and (2) more than 3 semesters of involvement in Greek life, which is labeled as high involvement. The independent samples $t$-test shows no statistical difference on N2 scores between the low level of student involvement in Greek life ($M = 28.05$, $SD = 12.11$, $n = 13$) and those involved at a high level in Greek life ($M = 25.10$, $SD = 11.38$, $n = 28$), $t(39) = 0.58$, $p = .45$, $\eta^2_p = .02$.

**Greek life leadership.** Result from Levene’s test suggests that the assumption for equality of variance was met ($F = 0.08$, $p = .78$). The level of involvement for Greek life leadership was coded as follows: (1) 1 or 2 semesters of leadership position, which is
labeled as low involvement, and (2) more than 3 semesters of leadership in Greek life, which is labeled as high involvement. The independent samples t-test shows no statistical difference on N2 scores between the low level of student involvement in Greek leadership ($M = 24.28, SD = 12.09, n = 20$) and those involved at a high level in Greek leadership ($M = 25.46, SD = 10.14, n = 10$), $t_{(1,28)} = 0.07, p = .79, \eta_p^2 = .003$.

**Internship.** The level of involvement for structured internship was categorized into low (less than 20 hours of work during a semester), medium (21 - 40 hours of work during a semester), and high (41 or more hours of work during a semester). The ANOVA shows that no mean difference on N2 scores among students with low level of involvement in structured internship ($M = 27, SD = 13.78, n = 23$), those with medium level of involvement in structured internship ($M = 18.41, SD = 15.27, n = 19$), and those with a high level of involvement in structured internship ($M = 21.72, SD = 5.06, n = 3$) was found ($F_{(2,42)} = 1.93, p = .16, \eta_p^2 = .08$).

**Faculty mentored research.** The level of involvement for students who worked on faculty mentored research projects was categorized as low (1 - 9 hours spent weekly on research), medium (10 - 20 hours of work spent weekly on research), and high (> 20 hours per work spent on research). Result from Levene’s test suggests assumption for equality of variance was met for level of student involvement in faculty mentored research projects ($F = .13, p = .88$). The ANOVA shows that no mean difference on N2 scores among students with low level of research participation ($M = 30.88, SD = 14.98, n = 20$), those with medium involvement in research participation ($M = 31.55, SD = 15.68, n = 25$), and those involved at a high level in research participation ($M = 19.97, SD = 17.28, n = 7$) was found ($F_{(2,49)} = 1.59, p = .21, \eta_p^2 = .06$).
**Total co-curricular experiences.** A one-way between-subject ANOVA with 5 different categories that were divided by number of co-curricular experiences was performed to assess whether the N2 scores were different between the five groups. The five groups were defined as 0 = no involvement, 1 = one co-curricular experience, 2 = two co-curricular experiences, 3 = three co-curricular experiences, and 4 = four co-curricular experiences. The ANOVA showed no statistical mean difference on N2 scores among all five groups. Result from Levene’s test suggests assumption for equality of variance was met for total student co-curricular experiences ($F = .26, p = .91$). The results are as follows: students with no co-curricular experience ($M = 26.63, SD = 15.25, n = 67$), for students with 1 co-curricular experience ($M = 23.55, SD = 14.93, n = 54$), for students with two co-curricular experiences ($M = 28.01, SD = 14.08, n = 32$), for students with 3 co-curricular ($M = 25.77, SD = 13.97, n = 23$), and for students with four co-curricular experiences ($M = 23.61, SD = 11.51, n = 2$).

**Final ANOVA Model on N2 Scores**

The two variables that showed a significant effect on N2 scores were faculty mentored research and sex. Therefore, as a final model, a two-way between-subject ANOVA was conducted to determine how each variable makes a difference on N2 scores when the other variable is being controlled.

As shown in Table 7, statistical mean difference on N2 scores was found between students involved in faculty mentored research, when sex was controlled ($F_{(2, 170)} = 4.48, p = .04, \eta^2_p = .03$). No statistical mean difference on N2 scores by sex was found when faculty mentored research was controlled ($F_{(2, 170)} = 2.86, p = .06, \eta^2_p = .03$). No interaction effect was found on N2 scores ($F_{(2, 170)} = 1.23, p = .30, \eta^2_p = .30$). This result
suggests that students with faculty mentored research were showing a statistically higher mean on N2 scores than those without faculty mentored research, regardless of their sex.
Chapter 5: Discussion

This cross-sectional and correlational study was designed to provide a better understanding of the moral development of undergraduate college students. The relationship of whether students involved in co-curricular experiences, the level of co-curricular involvement, and background characteristics on moral judgment were explored using a convenience sample of college students. Improving students’ moral judgment may provide faculty and college administrators with an opportunity to sustain and cultivate values of honesty, ethical responsibility, and academic integrity through various college experiences. The summary of the study design, major statistical findings, the limitations of the current research, and implications for future research and practice are discussed in this chapter.

Summary of the Study

This study examined undergraduate student involvement in co-curricular experiences (student government association, Greek life, Greek leadership, internship, and faculty mentored research) and levels of moral development using an anonymous student survey that was distributed electronically to all undergraduate students at the end of the spring semester. The level of student involvement (degree of commitment) in various co-curricular experiences and student background characteristics were examined for a relationship with moral development. These research questions were explored using a series of independent samples $t$-tests and Between-subject Analysis of Variance (ANOVA) on the data collected from the student survey.

Research question 1. Information on student characteristics (age, sex, and academic level) was examined using independent $t$-tests and ANOVA to understand the
effect if any these characteristics have on moral judgment. The research question was based upon the theory that student background characteristics, reported by participants, may show a relationship with the student’s moral development. These questions were examined using either independent samples $t$-test or ANOVA.

**Research question 2.** The second research question aims to determine the nature of student involvement in co-curricular activities and their moral judgment. Five sub-questions related to this inquiry include:

Research question 2.1 asked: What is the nature of the relationship of student involvement in student government association (SGA) and their moral judgment (N2 index)?

Research question 2.2 asked: What is the nature of the relationship of student involvement in Greek life and their moral judgment (N2 index)?

Research question 2.3 asked: What is the nature of the relationship of student involvement in Greek life leadership and their moral judgment (N2 index)?

Research question 2.4 asked: What is the nature of the relationship of student involvement in structured internships and their moral judgment (N2-index)?

Research question 2.5 asked: What is the nature of the relationship of student involvement in faculty mentored research and their moral judgment (N2-index)?

These research questions were based upon the theory that student involvement in co-curricular activities centered around experiential and inquiry based learning (Bateman & Donald, 1987; Baxter Magolda, 1999; King 1978, 2009; Kuh et al., 1991; Tinto, 1987, 1995) would support Astin’s (1984) Student Involvement Theory, and show a significant
and positive relationship with student’s moral development. These questions were examined using either independent samples $t$-test or ANOVA.

**Research question 3.** The third research question aims to determine the level of student involvement in co-curricular activities and their moral judgment. Five sub-questions related to this inquiry include:

Research question 3.1 asked: Does the level of student involvement in student government association (SGA) have a relationship with moral judgment (N2 index)?

Research question 3.2 asked: Does the level of student involvement in Greek life have a relationship with moral judgment (N2 index)?

Research question 3.3 asked: Does the level of student involvement in Greek life leadership have a relationship with moral judgment (N2 index)?

Research question 3.4 asked: Does the level of student involvement in a structured internship have a relationship with moral judgment (N2 index)?

Research question 3.5 asked: Does the level of student involvement in faculty mentored research projects have a relationship with moral judgment (N2 index)?

These research questions were based upon the theory that the level of involvement, which was measured by participant reported time on task and supported by Astin’s (1984) Student Involvement Theory and was expected to show a significant and positive relationship with the student’s moral development. These questions were examined using either independent samples $t$-test or ANOVA.

**Major Findings**

Two statistically significant results were found in this study: (1) students who participated on a faculty mentored research project showed a significant and positive
relationship with moral development and (2) females had a higher level of moral
development than males or intra-sexuals.

In response to the first research question, it was found that student involvement in
a faculty mentored research projects had a significant and positive relationship with
moral development as measured by the Defining Issues Test-2 (Rest et al., 1999). This
relationship should not be interpreted to be causal. Participation on a research project
provides an experiential learning opportunity to work outside of the classroom with a
faculty member as a researcher that may include collecting and analyzing data.

This finding is supported by a number of previous studies that have shown the
importance of out of class experiences, experiential learning, and exposure to divergent
intellectual and social perspectives and the positive relationship with student’s moral
judgment (Baxter Magolda, 1999; Derryberra & Thoma, 2000; Hurtado et al., 2003;
King, 1978; King & Mayhew, 1994; McNeel, 1994). Research projects are designed to
create knowledge to uncover information that could lead to improved medical, social, or
environmental conditions for individuals, community and society as a whole. This
experience may have greater impacts on raising social conscience, interacting in diverse
social experiences, and creating moral conflict that require the individual to access higher
order reasoning skills.

This finding may be the result of two factors involved in faculty mentored
research projects. One factor may be the type of research that the student is involved.
Even though students in this sample did not report on the type of research project that
they were engaged (medical, social science, humanities, environmental, ecological
science, etc…), it may be important to have made that distinction to provide relativity to
Kohlberg’s moral development theory (1969) as well as Rest’s (1993) theory on the general atmosphere of social environment and intellectual stimulation affecting moral development.

Participants who responded that they engaged with faculty on research projects were not asked to identify if the project was qualitative or quantitative in method design. Individuals engaged in qualitative research may be actively conducting interviews or directly observing the research subjects in the field and may require “role-taking” or actively taking the point of view of another in order to collect research data. Kohlberg’s (1969) moral development theory defined experiences that incorporate role-taking, engaging in experiences that have moral conflict, and taking the socio-moral perspective of others, are conducive to the development of moral judgment.

The nature of the individual research project may impact moral judgment levels differently than engagement in other types of research. For example, participation in research studying specific critical social conditions such as poverty, racism, health, schooling, or domestic violence may have a stronger effect on moral judgment than participation in research on the effectiveness of treatments for various behavioral, psychological, or medical disorders. Kohlberg’s moral development theory (1969, 1974) is founded on principles of social justice and participation in social research may provide both the context and environmental stimuli conducive for moral development. Kohlberg (1976) theorized that moral situations invoke a conflict of perspectives in the individual and justice principles are used to resolve the conflicts. The sense of justice and acting on a greater good such as working on a social justice research project may invoke similar conceptualized distinctions for students who work on service learning projects. Research
conducted by Astin and Sax (1998) found that service learning experiences had a positive relationship with moral development. The cognitive structural changes that occur as an individual’s moral judgment goes up may be affected in a similar manner for individuals who participate in research projects and those that participate on service learning project. The findings in this study may support previous studies that found a positive relationship with student service learning and their moral development (Astin & Sax, 1998; Astin et al., 1999; Glass & O’Neill, 2012; Gurin et al, 2002; Kuh, 1993; Kuh et al., 1991; Rivers, 2004). These studies support Kohlberg’s moral judgment theory (1969, 1974) that found exposure to diverse social experiences positively effects moral development. Further examination of these two student experiences, their shared activities, and the effect on moral development is needed to better understand the relationship with moral development.

Individuals who conduct research in a laboratory may not have interaction with the research participant or community context compared to those who conduct social science research. However, laboratory research may provide the interaction and collaboration with the faculty member thus contributing to the atmosphere that stimulates internal cognitive processing structures that are thought to impact an individual’s moral development (Piaget, 1953; Kohlberg, 1969, 1972, 1976; Kohlberg et al., 1983). Kohlberg (1969, 1974) theorized that an individual who is exposed to other people who invoke higher levels of moral judgment or reasoning to solve problems or dilemmas may create the environmental stimuli that is necessary for moral development to occur. Faculty members presumably have higher levels of moral development than students and
this interaction may have a positive effect on cognition and moral development of students (Mason & Gibbs, 1993; McNeel, 1994; Rest & Narvaez, 1994).

Furthermore, faculty members often engage in research projects in order to construct knowledge that is supplementary to their life’s work. The research interest goes beyond initial curiosity and primary interest but represents a psychological, emotional, and social commitment to uncover ways to improve a condition (social, medical or environmental). Students who work with faculty on their research project will be exposed to the stage of moral judgment that the faculty member invokes to pursue their research providing instruction and exposure to a range of intellectual and diverse cultural experiences.

The level of student involvement in faculty mentored research projects did not reveal statistical differences in moral judgment. The level or degree of involvement for this variable was divided into three categories: low involvement (1-9 hours per week), medium involvement (10-20 hours per week), and high involvement (20 or more hours per week). The range of N2 scores varied widely between the three levels with students reporting in the lowest level of involvement in faculty mentored research projects reporting the highest moral development. However the results were not significant. This finding may reflect one of the limitations of this study. A pre-test, post-test methodology was not used and may suggest that students’ level of moral judgment prior to engagement on the faculty mentored research may already be higher than those students who did not engage in a faculty mentored research. There may be distinctive college background or characteristics that attract specific students with higher levels of moral development toward faculty mentored research projects and confound the current study’s findings.
Therefore, the level of engagement (amount of time spent on the project) would not show significant results.

The results for sex differences replicated “24 of the 43 studies using the DIT-2 to measure moral judgment” (Mayhew et al., 2010, p. 360). Seventeen of those studies found no difference between gender and two found males scoring higher. For this study, two male scores are represented as the lowest N2 index (13.28) and highest N2 index (61.88).

The finding of sex differences in moral development provides further support for the work of Gilligan (1977) who argued that there are significant sex differences regarding conflict resolution. Gilligan’s theory and research on sex differences in ethical decision making is fundamentally based on the concept that women construct moral reasoning around concepts of responsibility and care (Gilligan 1977, 1993). She identified the female pattern of moral reasoning as the “justice voice” and named the moral orientation structure as the “care voice” (Gilligan 1977, 1993). According to Gilligan’s (1988) model of moral reasoning, women respond to moral dilemmas using ethics of care more than they used ethics of justice and may be indicative of how the women responded to the moral dilemmas used in the DIT-2 that measured moral development in this study. Thus, the DIT-2 scoring may apply higher N2 scores to the responses that address concepts of care and responsibility and not place as much emphasis on universal justice and right.

Gilligan’s research emphasized that women conceptualize just actions that reflect helping others and avoiding violence (Gilligan 1988). This may partly explain why women score higher on the DIT-2 than men. As women and men reason differently,
Gilligan found a trend in research that showed that males tend to apply moral judgment that are aligned with avoiding inequality rather than applying the universal principles of avoiding harm and respect of others rights (Gilligan 1977, 1993).

Due to the low male response and the quantitative nature of the study, it is difficult to conclude that males and females make moral decisions differently. Future research of moral development should make every attempt to attract individuals to the study such that equal sex representation may be measured and represented in the results. Adding a qualitative component to a future study may reveal further information into potential sex differences of moral reasoning that result in higher moral development.

**Secondary findings.** The study investigated the relationship between student involvement in student government association (SGA) and moral development (Research question 1.1). This question was explored using a single sample $t$-test and the results found that there was no statistical difference in Mean N2 scores for students who were involved in SGA. Involvement in a student government association could be characterized as a leadership role. It would be expected that students involved in student government would be exposed to justice principles, applying caring for the community and justice reasoning for other’s rights would be a fundamental component related to their leadership role and result in higher moral development (Kohlberg, et al., 1983). The lack of significant results may be due to low statistical power as only 11 students reported involvement in SGA.

The study examined student involvement in Greek life and the relationship (if any) with moral development (Research question 1.2). Though the mean difference in N2 scores was slightly higher for non- Greek students than Greek students, the result was not
statistically significant. The findings in this study may be explained by two factors. One, there was a low number of students who responded that they were members in Greek life ($n = 41$). The second factor is related to research question 1.3 in that 30 of the 41 students (73%) in Greek life were involved in Greek leadership and may positively influence or moderate (N2 scores) moral development of students who participate in Greek life.

Students who reported that they held leadership roles in Greek life reported slightly lower N2 scores than students who were members of Greek life and held no leadership position. However, the results were not statistically significant. Of the students who responded to the Greek life question ($n = 176$), the highest N2 scores were reported for students who responded that they were members of Greek life but did not hold a leadership position. This result may be due to the fact that specific clarification of the Greek leadership position that a student held in their fraternity or sorority, was not asked. It is posited that the higher levels of organizational positions (president, vice president) that a student holds, may show an impact on higher levels of moral development measured by the DIT-2.

Student involvement levels in Greek life and Greek life leadership (Research questions 2.2 and 2.3) were categorized into low involvement (1 or 2 semesters) and high involvement (3 or more semesters) based on the distribution of student responses. Students who reported low involvement in Greek life had the highest level of moral development but results were not statistically significant between levels of moral development (N2 scores) and level of involvement in Greek life. Though no statistical difference was found between the level of Greek life leadership involvement and moral
development, students with high level Greek leadership, had slightly higher N2 Scores than students with lower level of involvement.

The relationship (if any) between student participation in internships and moral development was studied (Research question 1.4). The findings for this question though not statistically significant showed that N2 scores were slightly higher for students who did not participate in a structured internship than students who did participate in a structured internship. These results contradict the findings in the McNeel (1994) study that showed gains in moral reasoning 1.7 times higher for students who participated in internship experiences than students who did not. However, this difference may be attributed to sampling error. A small number of students responded that they had participated in a structured internship (n = 30).

Level of involvement for student internship (Research question 2.4) was divided into three categories: low involvement (less than 20 hours per semester), medium involvement (21-40 hours per semester), and high involvement (more than 40 hours per semester). The range of N2 Scores are wide between the three levels of involvement. Students who responded with a low level of involvement in internship (less than 20 hours per semester) had the highest N2 Score. The results were not significant but suggest that future examination is warranted to uncover the effect of time in an internship and the relevant contribution (if any) on moral development.

An unexpected finding in this study that needs to be addressed was the overall mean N2 scores (moral judgment) of the study sample that reports a much lower score than other normative samples using the DIT-2 test (Rest et al., 1997, 1999). The average N2 score for this sample was 25.22 (SD =14.36). N2 scores in the twenties have been
reflective of individuals with educational levels between junior and senior high school (Rest, 1994). Average moral judgment scores for college students in general were in the 40’s, specifically between 40 and 42.3 (Rest, 1994). One possible explanation for this finding is the modified DIT-2 test used in this study that reduced the number of dilemmas from five dilemmas to three and may have resulted in lower scaled scores for moral judgment. The reported test re-test reliability of the shortened version of the DIT-2 is .555, .57, .66, and .50 ($p < .001$) and may have had an impact on this and all of the results in this study. The longer version of the DIT-2 has test-re-test reliability scores that range between .77 and .81 ($p < .001$) (Rest & Narvaez, 1998; Rest et al., 1997, 1999). More studies are needed that would justify the validity of a shortened version of the DIT-2 compared to the original DIT-2 scale.

**Implications**

Statistically significant findings in the study should be shared with institutions of higher education in an effort to promote student moral development outside of the formal academic framework. As this study shows, student involvement in faculty mentored research projects showed a significant relationship with students’ moral judgment and thus establishes a foundation for further examination of experiential learning and co-curricular opportunities that may have an impact on moral development. The findings also revealed that male students had lower moral development levels than females. This finding is consistent with previous studies that used the DIT-2 and found moral development differences based on gender. This relationship should be studied more in depth to better understand the variance in scores.
Efforts to establish a long-term, positive, and sustainable effect on college student moral judgment is needed as studies have shown a positive relationship between moral judgment and moral actions (Blasi, 1980; Mullane, 1999). Improving moral judgment and effecting moral actions of college students may have immediate and positive implications for the institution specifically on improving social behaviors and academic integrity by reducing cheating behaviors. In the interests of campus integrity and societal impact, every effort to support college students’ moral development should be made.

**Implications for institutions.** Fostering opportunities for students that may positively impact moral development is a desired outcome for institutions of higher education (Kezar, 2004; Reason, 2013). The findings from this study suggest that institutions interested in procuring a vehicle for developing moral judgment of its undergraduate students might consider ways to provide more institutional support for faculty members who develop research projects. In this way, faculty members may be more inclined to provide opportunities for undergraduate students to participate on research projects. Recommendations from The Council on Undergraduate Research (CUR) and the Characteristics of Excellence of Undergraduate Research (COEUR) provide a summary for best practices that institutions should follow.

The Council on Undergraduate Research (CUR) has been active for over 30 years encouraging institutions to support faculty members who engage with undergraduate students in research. Characteristics of Excellence of Undergraduate Research (COEUR) recommends that institutions should consider matching outside grant money to meet the financial needs required to support undergraduate researchers, provide compensation to faculty by issuing load credit for mentoring student researchers, create designated space
for research; ample access to equipment, library resources, computational resources, and funding opportunities for student travel, and publicity and recognition of undergraduate research (Council on Undergraduate Research, 2012). Various institutions employ some of the above listed support for undergraduate research. Though a specific institutional model illustrating compensation to faculty members’ research projects to support undergraduate student engagement is not readily accessible, it may be a valuable investment for institutions to consider.

The COEUR recommends that institutions may consider developing a research training workshop that provides instruction on research communication skills that includes writing a research report, creating a poster and skills in data collection (CUR, 2012). This may include instruction on research design, methodology and utilizing quantitative data analysis software such as SPSS. In this way, the goal of improving moral development of students through faculty mentored research opportunities becomes a shared objective between the institution and faculty.

**Implications for faculty.** The results of this study suggest that students may benefit from participation on faculty mentored research projects and reaches beyond previous research that showed a relationship with improved student retention rates (Nagda, 1998). Faculty members have long been committed to improving moral development of college students and improving the integrity on campus (Hurtado et al., 2003; McCabe 1993; McCabe et al., 2001; Pincus & Schmelkin, 2003). As such, the findings in this study suggest that faculty members may be able to directly influence student moral development by mentoring students on their research projects.
Characteristics of successful mentorship include the faculty member’s willingness to guide, train, and assist students to meet both the faculty member’s expectations for the research team but to also have the time that it takes to work with undergraduate students who have varying levels of experience, maturity, and commitment. Ideally, a mentor will quickly establish a positive working relationship with the student to promote the underlying skills necessary for a successful research relationship such as student inquiry, focus on the objectives, and disciplined work ethic including adherence to research directions.

However, mentorship of an undergraduate student entails a great deal of time and effort to assess the seriousness and maturity level of an undergraduate student before allowing them to participate on the project. Time is not an unlimited commodity and faculty members may be reluctant to mentor an undergraduate student for this very reason. This initial assessment of students’ capabilities is often revealed in the form of recommendations from other faculty members and administrators or an interview. The level of preparedness and experience to partake in the research project will vary between undergraduate students and this may not be easily recognized during initial contact nor from colleague’s recommendations.

Faculty members may also need to spend time instructing novice undergraduate researchers on research design, methodology, protocol for data collection procedures as well as data analysis before students are able to competently contribute to the research project. Faculty must trust that a student is capable to follow the details of data collection in order to avoid corruption or skewing of data. Such an event would compromise the integrity and outcome of the project. Though a faculty member may be willing to mentor a student, the investment of time and energy to train, instruct, guide, assist and supervise one student while completing a research project may not be optimal if even possible.
Therefore, it becomes even more important for institutions to recognize these factors and provide support for faculty members who express interest in providing a research experience for students.

**Implications for students.** The findings in this study are centered on understanding how experiential and inquiry based learning objectives in college may support student development—specifically moral development. Providing potential ways to increase moral judgment in college has long-term positive outcomes for students. Research has shown that increased moral development has a positive relationship with increased academic integrity and is known to have positive social and economic outcomes for students as well (Beck & Azjen, 1991; Goodman, 2010; Harding et al., 2004). Nonis & Swift (2001) conducted a longitudinal study on college student moral development and found that students who reported academic misconduct in college had a negative relationship with career success, as well as mental and physical well-being. Blankenship & Whitley (2000) also studied the relationship between academic misconduct and student outcomes and found a positive relationship with substance abuse and criminal behavior. Students who actively engage in experiences believed to promote moral development are known to have a positive relationship with academic integrity are in affect making an investment for future success.

**Limitations and Delimitations**

There are certain limitations that may affect external validity and generalizability of this study. The study did not control for pre-college characteristics and experiences on the relationship, that would be supported based on a longitudinal study. There are studies which have found that pre-college characteristics such as high school GPA, service
learning and exposure to diverse pre-college experiences will result in some students having higher levels of moral judgment (King & Mayhew, 2005; Mayhew et al., 2012). This limits the ability of the study to focus on college impact of moral development. Though the study found that students who reported that they participated in a faculty mentored research project had higher moral judgment scores, the relationship cannot be reported as causal.

The DIT-2 test (Rest, et al., 1999) was used to measure moral development and has two limiting factors. First, the measure of moral development by the DIT-2 is based on Kohlberg’s moral development theory which is value-neutral and is immersed in principles of justice reasoning. Perspectives on moral development include other elements necessary for moral development besides justice reasoning such as rules, conscience, personal welfare and welfare of others. Kohlberg (1969) and Rest (1976) developed their moral development assessments as tools to be re-used to measure changes in individual’s social perspectives and thus moral development. The participant’s N2 scores in this study are reflective of their moral development level at a specific point in time and should not be assessed as static but with the potential to go up or down.

The second limitation with regard to the DIT-2 is that this study used the three-dilemma/shortened version as opposed to the five-dilemma/full version, approved by the Ethical Study program (Appendix B). The three-dilemma version has a lower test re-test reliability scores: .555, .57, .66, and .50 ($p < .001$) and may not have measured moral development as precise as would have been possible with the longer version. The shortened version was selected in the interest of time needed to complete the survey in order to improve predicted attrition rates. One student participant who came to the
researcher’s office reported that the survey only took 10 minutes to complete as opposed to the estimated 20 minutes.

Social desirability bias may be a factor in the outcome of the study. An anonymous self-report survey, distributed electronically, was used to collect student opinions on various moral dilemmas and the key concepts that they felt were most important in determining their judgment of the dilemma. Participants may have responded to the dilemmas in a way that they believe is more positive or socially acceptable. Their responses may not actually reflect what they really believe and thus N2 scores could be skewed. Anonymity associated with electronic data collection used in this study should protect against social desirability bias. Electronic surveys tend to have lower reported participation rates and do not always provide researchers with the ideal sample in terms of numbers and demographics. However, to defray the social desirability bias, researchers should consider the anonymity aspect of the electronic survey process as opposed to using an in-person pencil and paper test procedure that many researchers still use when administering the DIT-2 test.

This study does not control for course-taking behavior. Research has shown that students who enroll in ethics courses and courses on diversity, social justice or content designed to advance moral reasoning skills may have higher levels of moral judgment (Hurtado, Mayhew, & Engberg, 2003; Mayhew & Engberg, 2010). It may be challenging for students to report on their course taking behavior and to differentiate the course attributes associated with advanced moral reasoning scores. However, controlling for interventions that have shown a relationship with moral development is important for future studies in this field.
The study did not control for other potential variables that may have a relationship with moral development such as the type of faculty mentored research that students worked. The study did not control for students’ major or area of study which has been shown to have a relationship with moral development (Cummings, Dyas, Maddux, & Kochman, 2001; Icerman, Karcher, & Kennelly, 1991; Jeffrey, 1993; McCabe & Trevino, 1997; Whitley & Keith-Spiegel, 1998; Wilhelm & Czyzewski, 2006) political views (Kohlberg & Mayer, 1972) or religious affiliation (Meyer, 1977; Smith, Wheeler, & Diener, 1974; Sutton & Huba, 1995).

The study was conducted at one research-one institution at the end of the spring semester. The timing of the survey may have impacted the number of student survey responses as they prepared for their final papers and exams (Appendix F). One student contacted the researcher via email with feedback: “survey did not seem objective and I don’t feel I should complete it” (Appendix F). Some of the student feedback was positive. Two students who knew the researcher and randomly passed on campus, explained that the survey was “intense, it really made me think”.

**Future Research**

Future research should develop a way to distinguish the type of research (social science, medical or natural science) that students engage to better inform the qualitative aspects of the relationship between research and moral judgment. Understanding the relevance of that relationship may uncover ways to adapt other co-curricular experiences to foster the elements that are likely to foster greater levels of moral development.

Further examination of the qualities of the mentor relationship could be studied to understand the way that higher order reasoning skills may be impacted. Studying the
faculty interaction and mentorship relationship may help to further understand the mechanism by which an individual’s cognitive framework of information affects their moral judgment. This could help determine if moral judgment is influenced by the activities of the research project’s specific tasks of collecting and analyzing data for the research project or if interaction with the faculty member improves moral development.

Some mentor student relationships may be associated with a social interactive dialogue whereby the faculty member takes an interest in the student’s academic and social life. Conversely, the mentor relationship may revolve completely around the research project and interaction is limited to discussing opinions and the value of the research. Examining the mentor student inter-personal relationship may uncover further information on ways to positively affect moral judgment levels.

**Broader research objectives.** The finding provides a foundation for further inquiry into the tasks or pertinent activities that correspond to various co-curricular experiences and the relationship with moral development. Certain activities may attract a certain type of student or individual. For example, service learning projects may attract students who have a desire to go into public policy. Greek life may attract students who are more socially outgoing and seek to develop interpersonal relationships in college. Studying student attributes and the attraction to the attributes of the activity may provide a better understanding of students who are likely to engage in experiences that have shown a relationship with moral development and how or why it is relevant to that experience.

There are many student background characteristics that could be measured with moral development that were not examined in this study. Those characteristics include
student political orientation, religious affiliation, academic achievement-GPA, and aptitude/intelligence - I.Q, college major, pre-college involvement activities including volunteer and service experiences. This type of study may help to understand what pre-college characteristics may attract certain students to various co-curricular experiences and if those pre-college characteristics have a relationship with moral development.

Practice. The study found that females have a statistically significant higher moral judgment than males. Institutions may consider ways to provide more support for males to engage in learning opportunities which show to have a positive relationship on moral judgment scores such as faculty mentored research projects (as shown in this study), as well as service learning opportunities as found in the Astin and Sax study (1999) and Kuh’s studies (1995, 2008). Providing more opportunity for diversity courses and discussion may also have a positive impact on moral judgment (Mayhew & Engberg, 2010; Mayhew & King, 2008).

The study used a convenience sampling method of collecting data through an online survey that protected the anonymity of the participant and allowed for broad distribution across the 8 schools and colleges of the institution used for this study. Anonymity is important for authentic responses to the DIT-2 (Rest et al., 1999) that require participants to make judgments on contemporary issues/dilemmas which ultimately determine the moral judgment score used in this study. Individuals respond to dilemmas from an individualized perspective and may express unpopular or unfavorable responses to the questions. If an individual feels that others may learn of their response it could result in flawed results.
Conclusion

The study was designed to increase the understanding of college student moral development through participation in various co-curricular experiences. The major finding shows some evidence that there may be a link between student engagement in faculty mentored research projects and moral development. However, it is unclear if students’ level of moral development was higher prior to beginning the project or if the experience provided a structural cognitive change in the individual’s reasoning process such that moral development was positively affected. The experiential tasks associated with faculty mentored research projects support Kohlberg’s theory of moral development that requires individuals to balance the interests, values and beliefs of others with one’s core value system and assess their experiences with environmental stimuli (Kohlberg, 1969, 1974, 1976).

Sex differences in moral development consistent with some previous studies that used the DIT-2 and measured gender differences in moral development were found. Further examination is needed to understand the context of this finding. Several study limitations exist that may explain this relationship finding (low male participation, validity of the shortened DIT-2, timing of the study).

Some important ideas regarding college student co-curricular experiences and the relationship that they may have on students’ moral development were raised in this study. Moral development of college students is becoming increasingly important as studies show that students are more accepting and have positive attitudes toward cheating and plagiarism, often with a resolve that cheating is not a big deal (McCabe & Trevino, 1995, 2002; Power, 2009). Attitudes of low academic integrity have been associated with
negative personal outcomes including substance abuse, criminal activity, dis-satisfaction with career, and poor psycho-social well-being and adjustment (Blankenship & Whitley, 2000; Mayhew & Hubbard, 2009; Nonis & Swift, 2001). Institutions that provide meaningful dialogue and provide enhanced active learning opportunities aimed at developing moral judgment, will encourage a campus culture committed to high ethical standards (Paldy, 1996). High ethical standards of an educated work force would have positive implications for a future society. Examining ways to improve moral development is an important outcome for the student, the institution, and society. The findings in this study contribute to the knowledge on moral development theory and practice and lay fundamental groundwork for future investigation.
References


Student cheating. *Journal of Educational Psychology, 88, 229-241.*

dishonesty and workplace dishonesty: A multi-campus investigation. *Journal of
Education for Business, November/December, 60-76*

*Improving College & University Teaching, 32, 140-144.*

Paldy, L. G. (1996). The problem that won’t go away: Addressing the causes of
cheating. *The Journal of College Student Development, 10, 4-6.*

*Educational Record, 78(3,4), 47-55.*

of research.* San Francisco: Jossey-Bass.

University Press.

multidimensional scaling of college students’ perceptions of academic dishonesty.


Chickering & Associates. *The modern American college: Responding to the new

Paul.


Pincus, H. S., & Schmelkin, L. P. (2003). Faculty perceptions of academic dishonesty:


Turiel, E. (1965). An experimental test of the sequential of developmental stages in the
child’s moral development. Doctoral Dissertation, Yale University.
Comprehensive Dissertation index 37, 66-0115.

Second handbook of research on teaching. Chicago: Rand McNally College
Publishing Company.

educational gains from participation in intensive co-curricular experiences at
Bridgewater State University. Journal of Assessment and Institutional
Effectiveness, 2(1), 30-54.

University of Miami Factbook retrieved from internet on April 4th, 2016 from:

follow-up and the addition of an honor code. Journal of College Student
Development, 48(4), 468-480.

Psychology, 123, 709-713.


Wilhelm, W. J. (2008). Integrating instruction in ethical reasoning into undergraduate

reasoning of undergraduate business students using an ethical decision-making
framework in a basic accounting course. Collected Papers and Abstracts of the
American Accounting Association 2006 Southwest Regional Meeting, USA,55 –
62.


<table>
<thead>
<tr>
<th>The Six Stages of Moral Judgement</th>
<th>What is right</th>
<th>Reasons for doing right</th>
<th>Social perspectives of stage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level I Pre-conventional</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 1 Heteronomous Morality Perspective</td>
<td>Avoiding breaking rules backed by punishment; obedience for its own sake; avoid physical damage to persons and property</td>
<td>Avoidance of punishment and the superior power of authorities</td>
<td>Egocentric Point of view. Doesn’t consider the interest of others or recognize that they differ from actor’s. Actions are considered physical rather than psychological.</td>
</tr>
<tr>
<td>Stage 2 Individualism Instrumental purpose and exchange</td>
<td>Following rules only when it is to someone’s immediate interests; acting to meet your own interests</td>
<td>Serving your own needs or interests in a world where you have to recognize other’s interests</td>
<td>Concrete individualism: Aware that everyone has his own interest to pursue and these conflict; Right is relative</td>
</tr>
<tr>
<td><strong>Level II Conventional</strong> Individual’s personal relationships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 3 Mutual Interests; Personal relationships and inter-personal conformity</td>
<td>Being Good is individual’s personal expectations and shows concern for others; Fulfilling the actual duties to which you have agreed.</td>
<td>Supports stereo-typical good behavior</td>
<td>The concrete “Golden Rule”, putting yourself in the other’s shoes; Does not yet consider generalized system perspective.</td>
</tr>
<tr>
<td>Stage 4 Social System and conscience</td>
<td>Laws are to be upheld to avoid the breakdown in the system; Except in extreme cases where they conflict with other fixed social duties</td>
<td>To keep the institution going as a whole; to avoid the imperative of the conscience to meet your defined obligations. Easily define roles and rules. (can be confused with stage 3 beliefs in rules).</td>
<td>Differentiation of societal points of view from interpersonal agreement or motives. Takes the point of view of the system; Considers individual relations in terms of place in system.</td>
</tr>
<tr>
<td>Level III</td>
<td>Post-Conventional Principles Contracts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 5 Social Conflict and utilitarianism</td>
<td>Being ware that people hold a variety of values and opinion and relative to a group. Rules should be upheld for impartiality</td>
<td>A sense of obligation because of social contract to make/abide by laws for welfare of all; protection of people’s rights.</td>
<td>Prior-to-society perspectives. Rational awareness of values and rights prior to social attachments: perspectives by formal mechanisms and due process.</td>
</tr>
<tr>
<td>Stage 6 Universal agreements; Principles recognizing them</td>
<td>Social agreements are valid because they rest on non-relative principles (life, liberty).</td>
<td>Greatest good for greatest number.</td>
<td>Perspective of a moral point of view. Perspective is that of any rational individual. The nature of morality or the fact that persons are end selves and must be treated as such.</td>
</tr>
</tbody>
</table>

Table adapted from Kohlberg, 1974
Table 2
Student Characteristics by Academic Levels, Sex, and Age

<table>
<thead>
<tr>
<th>Academic Level</th>
<th>Male</th>
<th>Female</th>
<th>Intra-Sex</th>
<th>18 to 24</th>
<th>24+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>9</td>
<td>19</td>
<td>1</td>
<td>29</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Sophomore</td>
<td>13</td>
<td>26</td>
<td>1</td>
<td>38</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>Junior</td>
<td>16</td>
<td>33</td>
<td>1</td>
<td>46</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Senior</td>
<td>21</td>
<td>35</td>
<td>1</td>
<td>55</td>
<td>2</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>113</td>
<td>4</td>
<td>168</td>
<td>8</td>
<td>176</td>
</tr>
</tbody>
</table>
Table 3
Frequency Table of Participants by Co-curricular Experience

<table>
<thead>
<tr>
<th>Involvement</th>
<th>MALE</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
<td>4th</td>
<td>total</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
<td>4th</td>
<td>total</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
</tr>
<tr>
<td>SGA</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Greek life</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>8</td>
<td>28</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Greek leader</td>
<td>-</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>10</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>19</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Internship</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>11</td>
<td>21</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>18</td>
<td>28</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FM Research</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>14</td>
<td>0</td>
<td>10</td>
<td>14</td>
<td>21</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>13</td>
<td>11</td>
<td>34</td>
<td>59</td>
<td>5</td>
<td>30</td>
<td>35</td>
<td>56</td>
<td>126</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Note. 1st: Freshman, 2nd: Sophomore, 3rd: Junior, and 4th: Senior; SGA = Student Government Association; FM Research = Faculty mentored research
## Table 4

*N2 Score by Student Characteristics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N2 Score</th>
<th>M</th>
<th>SD</th>
<th>n</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
<th>$\eta^2_p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.61**</td>
<td>2</td>
<td>175</td>
<td>0.004</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>22.39</td>
<td>13.46</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>28.14</td>
<td>14.72</td>
<td>114</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intra-Sex</td>
<td></td>
<td>10.13</td>
<td>15.74</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.42</td>
<td>3</td>
<td>172</td>
<td>.74</td>
<td>.04</td>
</tr>
<tr>
<td>Freshman</td>
<td></td>
<td>19.77</td>
<td>15.04</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
<td>28.15</td>
<td>12.98</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior</td>
<td></td>
<td>25.05</td>
<td>15.33</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td></td>
<td>27.52</td>
<td>14.69</td>
<td>57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$t$</td>
<td>df</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24 years old</td>
<td></td>
<td>26.06</td>
<td>14.67</td>
<td>169</td>
<td>0.36</td>
<td>176</td>
<td></td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>24+ years old</td>
<td></td>
<td>20.91</td>
<td>15.16</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.  * $p < .05$; ** $p < .01$
# Table 5

*N2 Score by Co-curricular Experiences*

<table>
<thead>
<tr>
<th>Involvement</th>
<th>N2 Score</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>n</td>
<td>t</td>
<td>df</td>
<td>p</td>
</tr>
<tr>
<td>SGA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>21.44</td>
<td>16.97</td>
<td>11</td>
<td>-1.02</td>
<td>176</td>
<td>.31</td>
</tr>
<tr>
<td>No</td>
<td>26.08</td>
<td>14.55</td>
<td>167</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greek life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>25.45</td>
<td>12.48</td>
<td>41</td>
<td>-0.24</td>
<td>80.52</td>
<td>.81</td>
</tr>
<tr>
<td>No</td>
<td>26.02</td>
<td>15.41</td>
<td>135</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greek leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>24.67</td>
<td>11.31</td>
<td>30</td>
<td>-0.52</td>
<td>40</td>
<td>.61</td>
</tr>
<tr>
<td>NO</td>
<td>26.88</td>
<td>15.11</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>23.88</td>
<td>14.61</td>
<td>53</td>
<td>-1.12</td>
<td>175</td>
<td>.25</td>
</tr>
<tr>
<td>NO</td>
<td>26.70</td>
<td>14.75</td>
<td>124</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty mentored research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>29.10</td>
<td>14.92</td>
<td>60</td>
<td>2.14*</td>
<td>174</td>
<td>.03</td>
</tr>
<tr>
<td>NO</td>
<td>24.13</td>
<td>14.45</td>
<td>116</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p* < .05
<table>
<thead>
<tr>
<th>Level of Involvement</th>
<th>N2 Score</th>
<th>M</th>
<th>SD</th>
<th>n</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
<th>$\eta_p^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Involvement (1, 2 Semesters)</td>
<td></td>
<td>28.05</td>
<td>12.11</td>
<td>13</td>
<td>0.58</td>
<td>1</td>
<td>39</td>
<td>.45</td>
<td>.02</td>
</tr>
<tr>
<td>High Involvement (3+ Semesters)</td>
<td></td>
<td>25.10</td>
<td>11.38</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greek Leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Involvement (1, 2 Semesters)</td>
<td></td>
<td>24.28</td>
<td>12.09</td>
<td>20</td>
<td>0.07</td>
<td>1</td>
<td>28</td>
<td>.79</td>
<td>.003</td>
</tr>
<tr>
<td>High Involvement (3+ Semesters)</td>
<td></td>
<td>25.46</td>
<td>10.14</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (less than 20 hours/semester)</td>
<td></td>
<td>27.00</td>
<td>13.78</td>
<td>23</td>
<td>1.93</td>
<td>2</td>
<td>42</td>
<td>.16</td>
<td>.08</td>
</tr>
<tr>
<td>Medium (21 - 40 hours/semester)</td>
<td></td>
<td>18.41</td>
<td>15.27</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High (more than 40 hours/semester)</td>
<td></td>
<td>21.72</td>
<td>5.06</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Mentored Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (1 - 9 hours/week)</td>
<td></td>
<td>30.88</td>
<td>14.98</td>
<td>20</td>
<td>1.59</td>
<td>2</td>
<td>49</td>
<td>.21</td>
<td>.06</td>
</tr>
<tr>
<td>Medium (10 - 20 hours/week)</td>
<td></td>
<td>31.55</td>
<td>15.68</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High (20+ hours/week)</td>
<td></td>
<td>19.97</td>
<td>17.28</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Co-curricular Experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Co-curricular experience</td>
<td></td>
<td>26.63</td>
<td>15.25</td>
<td>67</td>
<td>0.26</td>
<td>4</td>
<td>173</td>
<td>.69</td>
<td>.01</td>
</tr>
<tr>
<td>1 Co-curricular experience</td>
<td></td>
<td>23.55</td>
<td>14.93</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Co-curricular experiences</td>
<td></td>
<td>28.01</td>
<td>14.08</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Co-curricular experiences</td>
<td></td>
<td>25.77</td>
<td>13.97</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Co-curricular experiences</td>
<td></td>
<td>23.61</td>
<td>11.51</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Co-curricular experiences</td>
<td></td>
<td>25.80</td>
<td>14.69</td>
<td>178</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>N2 Score</td>
<td></td>
<td></td>
<td>Effect</td>
<td>F</td>
<td>df1</td>
<td>df2</td>
<td>p</td>
<td>( \eta^2_p )</td>
</tr>
<tr>
<td>--------------</td>
<td>----------</td>
<td>-------</td>
<td>-----</td>
<td>--------</td>
<td>-------</td>
<td>-----</td>
<td>-----</td>
<td>------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMR: No</td>
<td>21.41</td>
<td>13.44</td>
<td>45</td>
<td>Gender</td>
<td>2.86</td>
<td>2</td>
<td>170</td>
<td>.06</td>
<td>.03</td>
</tr>
<tr>
<td>FMR: Yes</td>
<td>24.95</td>
<td>13.96</td>
<td>14</td>
<td>FMR</td>
<td>4.48*</td>
<td>1</td>
<td>170</td>
<td>.04</td>
<td>.03</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td>Gender * FMR</td>
<td>1.23</td>
<td>2</td>
<td>170</td>
<td>.30</td>
<td>.01</td>
</tr>
<tr>
<td>FMR: No</td>
<td>26.86</td>
<td>14.33</td>
<td>68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMR: Yes</td>
<td>30.32</td>
<td>15.28</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intra-sexual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMR: No</td>
<td>2.74</td>
<td>6.65</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMR: Yes</td>
<td>29.1</td>
<td>14.92</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. FMR = Faculty Mentored Research; \(* p < .05\)
Appendix A
Permission granted to Remove Demographic Information

Dear Dr. Astorini,
Yes, you can remove those demographic questions and modify the educational level question. However, please make sure that you delineate these changes again when you send your data to us for scoring. Since our scoring procedure is standardized, we need to be aware of these changes in your final data to make sure we do the necessary modifications in the scoring process.

Since the DIT-2 can only be scored by our center, we cannot provide you with much information on scoring. However, after you send us the data for scoring, we will provide you with a free DIT-2 Guide, which can help you interpret the DIT-2 data. Please let me know if you need further information. Thank you!

Yangxue (Sophie)

Office for the Study of Ethical Development
307 Carmichael Hall
BOX 870231
The University of Alabama
Tuscaloosa, AL 35487
www.ethicaldevelopment.ua.edu

From: Astorini, Gina F [gfastorini@miami.edu]
Sent: Tuesday, February 25, 2014 2:10 PM
To: ethicalstudy
Cc: Astorini, Gina F
Subject: RE: Ordering the DIT-2

Dear Sir,

I would like to modify the question on level of education as I am using the survey for undergraduates who are junior or senior level.

I would like permission to remove some of the demographic questions. I would like to remove the questions on race/ethnicity, Age in years, political views, and citizen of the U.S. Please advise if it is okay to do this. I would also like to have any information on the DIT-2 that you have, reliability, validity measures, and information on scoring. I am willing to pay for this, I just didn't see how to request this information.

Thank you so much!

Gina Astorini
Appendix B

Hi, Gina,

OK. Please go ahead with the combination of 1, 2, and 4. Feel free to let us know if you have further questions.

Thanks,

Hong

Center for the Study of Ethical Development
307 Carmichael Hall
BOX 870231
The University of Alabama
Tuscaloosa, AL 35487
www.ethicaldevelopment.ua.edu

From: Astorini, Gina F [gfastorini@miami.edu]
Sent: Friday, June 06, 2014 8:12 PM
To: ethicalstudy
Subject: RE: Permission to shorten the DIT-2

Dear Hong,

If you have scoring available for dilemmas 1, 2 and 4, then I would be okay with using these three dilemmas.
You would not need to check with programming.

Please let me know if I can go ahead and use only dilemmas 1, 2, and 4 and that you have special programming for these three only.

Thank you,

Gina
Appendix C

Dear Gina,

Here is the response from our director, Dr. Thoma:

The upper limits for the scale scores are:

- Personal Interest: 0-100.
- Post conventional: 0-95.

The variation in upper limits are due to the distribution of items across the 5 stories, i.e., for some stories it is not possible to fill the 4 ranks with items representing the same schema.

The N2 follows the P score range but can go slightly negative if P is very low and there is a greater preference for Personal interest over Post conventional Items. Similarly the N2 can approach 100 if P is very high and the participant makes clear distinctions between P and personal interest items.

Note that the expected scores based on the norms are significantly less than these potential high scores.

Best,
Steve Thoma

Please let us know if you have further questions.

Thanks,

Hong

Center for the Study of Ethical Development
307 Carmichael Hall
BOX 870231
The University of Alabama
Tuscaloosa, AL 35487
www.ethicaldevelopment.ua.edu
Appendix D
APPROVAL

April 21, 2016

Scot Evans
305-284-4142
s.evans4@miami.edu

Dear Dr. Scot Evans:

On 4/20/2016, the IRB reviewed the following submission:

<table>
<thead>
<tr>
<th>Type of Review:</th>
<th>Initial Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Study:</td>
<td>THE RELATIONSHIP BETWEEN CO-CURRICULAR COLLEGE EXPERIENCES AND STUDENTS’</td>
</tr>
<tr>
<td>Investigator:</td>
<td>Scot Evans</td>
</tr>
<tr>
<td>IRB ID:</td>
<td>20160370</td>
</tr>
<tr>
<td>Funding:</td>
<td>None</td>
</tr>
</tbody>
</table>
| Documents Reviewed: | • IRB Invitation Letter (Astorini, Gina F) 4-16.docx  
|                 | • Dr. Scotney Evans Curriculum Vitae.docx  
|                 | • IRB ASTORINI Proposal References.docx  
|                 | • Contemporary_Student_Issues survey 4-14-16.docx  
|                 | • IRB Invitation Advising Letter Follow Up.docx  
|                 | • IRB HRP-503 - ASTORINI DOCUMENT 4-19.docx  
|                 | • Resume-2016.docx  
|                 | • IRB coi.pdf  |
The IRB approved the study from 4/20/2016.

To document consent, use the consent documents that were approved and stamped by the IRB. Go to the Documents tab to download them.

**NOTE:** Translations of IRB approved study documents, including informed consent documents, into languages other than English must be submitted to HSRO for approval prior to use.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system.

Should you have any questions, please contact: [Vivienne Carrasco](#), Sr. IRB Regulatory Analyst, (phone: 305-243-6713; email: vcarrasco@med.miami.edu)

Sincerely,

[This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature]

Khemraj (Raj) Hirani, MPharm, Ph.D., CPH, RPh, CCRP, CHRC, RAC, MBA  Associate Vice Provost for Human Subject Research
Appendix F

Tue 4/26/2016 9:33 PM

Very interesting survey!

Thanks for helping my procrastinate on my finals. I had a question: is a heliotrope drug a real thing? I have no idea what that means and I even googled it and couldn't figure it out. Also the structure of the survey was kind of difficult at first, so the answers to the first question about the candidate personally might not have been accurate because I might not have fully understood the instructions.

**********************************************************************
Fri 4/22/2016 4:58 PM
Dear XXX,

Thank you for your feedback!!! I appreciate your attempt at assessing the dilemmas. There are responses that allow for participants to not assign judgment one way or another. I understand and want to thank you for taking the time to read through the survey and then email me about it! This demonstrates integrity though I do wish I could have provided responses that you were comfortable to select in order to complete the survey. Good luck on your finals!

Gina Astorini

Sent from my iPhone

> On Apr 22, 2016, at 4:29 PM, "XXX" wrote:
> > Hello Ms. Fastorini,
> > > I tried to participate in your survey. But upon reaching the very first scenario (famine) it seems the questions aren’t impartial or do not offer enough variety.
> > > There is no way for me to answer the way in which I truly feel or believe. The question setup is also rather confusing.
> > > I will not be completing the survey since I feel my answers may not portray my true beliefs and ideas and I would rather not skew your data or be misinterpreted.
> > > Just thought I would provide some feedback.
> > > Best
Appendix G
Contemporary Student Issues
Q1 University of Miami

CONSENT TO PARTICIPATE IN A RESEARCH STUDY (College student opinions on contemporary issues and the relationship of co-curricular activity). The following information describes the research study in which you are being asked to participate. Please read the information carefully. At the end, you will be asked to sign if you agree to participate.

PURPOSE OF STUDY: You are being asked to participate in a research study. The purpose of this study is to gain student opinions and judgment on contemporary and socio-political issues. This survey is administrated through a private web-based survey and responses will be completely anonymous. The answers that you provide will not be able to be linked with any of your personal information.

Procedures
1. You will be presented with a short story about a contemporary issue or dilemma.
2. You will then be asked to give your opinion about how the dilemma could be resolved by clicking on a multiple choice response. There are no right or wrong answers only your opinion.
3. You will then be asked to click on various experiences that you have had in college and rank your participation appropriately.
4. The survey will not take more than 20 minutes.
5. You should then submit your survey to the secure survey management web-site.

Risks and/or Discomforts I do not anticipate that you will experience any personal risk or discomfort from taking part in this study by completing the survey.

Benefits: No benefit can be promised to you from your participation in this study. The study is expected to provide information to improve the undergraduate experience at UM.

Confidentiality: by signing this consent, you authorize the Investigator to access your survey as may be necessary for purposes of this study.

Costs: There are no costs associated with your participation in this study.

Compensation: There is a link at the end of the survey which will take you to a separate web-page that you can enter your e-mail and contact information which will enter you into a raffle to win a gift certificate to the UM Bookstore. The prizes that will be randomly awarded are 1-$50 gift certificate; 2- $25 gift certificates; 10- $10 gift certificates.

Right to Decline or Withdraw

Your participation in this study is voluntary. You are free to refuse to participate in the study or withdraw your consent at any time during the study. If you are an employee or student at the University of Miami, your desire not to participate in this study or request to withdraw will not adversely affect your status as an employee or grades at the
PARTICIPANT AGREEMENT: I have read the information in this consent form and agree to participate in this study. I have had the chance to ask any questions I have about this study, and they have been answered for me. I am entitled to a copy of this form after it has been read and signed.

I agree to participate in this study (1)

This questionnaire is concerned with how you define the issues in a social problem. Several stories about social problems will be described. After each story, there will be a list of questions. The questions that follow each story represent different issues that might be raised by the problem. In other words, the questions/issues raise different ways of judging what is important in making a decision about the social problem. You will be asked to rate and rank the questions in terms of how important each one seems to you.

EXAMPLE

Imagine you are about to vote for a candidate for the Presidency of the United States. Before you vote, you are asked to rate the importance of five issues you could consider in deciding who to vote for. Rate the importance of each item (issue) by checking the appropriate box.
*1. Rate the following issues in terms of importance.

<table>
<thead>
<tr>
<th></th>
<th>Great (1)</th>
<th>Much (2)</th>
<th>Some (3)</th>
<th>Little (4)</th>
<th>No (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Financially are you personally better off now than you were four years ago? (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. Does one candidate have a superior moral character? (2)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. Which candidate stands the tallest? (3)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. Which candidate would make the best world leader? (4)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. Which candidate has the best ideas for our country’s internal problems, like crime and health care. (5)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Note. Some items may seem irrelevant or not make sense (as in item #3). In that case, rate the item as "NO". After you rate all of the items you will be asked to RANK the top four items in terms of importance. Note that it makes sense that the items you RATE as most important should be RANKED as well. So if you only rated item 1 as having great importance you should rank it as most important.
2. Consider the 5 issues above and rank which issues are the most important.

<table>
<thead>
<tr>
<th></th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most important item (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Second most important item (2)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Third most important item (3)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Fourth most important item (4)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Again, remember to consider all of the items before you rank the four most important items and be sure that you only rank items that you found important. Note also that before you begin to rate and rank items you will be asked to state your preference for what action to take in story.

Thank you and you may begin the questionnaire!

Famine
The small village in northern India has experienced shortages of food before, but this year's famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh's family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man's warehouse. The small amount of food that he needs for his family probably wouldn't even be missed.

What should Mustaq Singh do? Do you favor the action of taking food?
✓ Should take the food (1)
✓ Can't decide (2)
✓ Should not take the food (3)

Rate the following issues in terms of importance.
<table>
<thead>
<tr>
<th></th>
<th>Great (1)</th>
<th>Much (2)</th>
<th>Some (3)</th>
<th>Little (4)</th>
<th>No (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is Mustaq Singh courageous enough to risk getting caught for stealing? (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Isn't it only natural for a loving father to care so much for his family that he would steal? (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Shouldn't the community's laws be upheld? (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Does Mustaq Singh know a good recipe for preparing soup from tree bark? (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Does the rich man have any legal right to store food when other people are starving? (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Is the motive of Mustaq Singh to steal for himself or to steal for his family? (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. What values are going to be the basis for social cooperation? (7)

8. Is the epitome of eating reconcilable with the culpability of stealing? (8)

9. Does the rich man deserve to be robbed for being so greedy? (9)

10. Isn't private property an institution to enable the rich to exploit the poor? (10)

11. Would stealing bring about more total good for everybody concerned or wouldn't it? (11)

12. Are laws getting in the way of the most basic claim of any member of a society? (12)
Consider the 12 issues above and rank which issues are the most important.

<table>
<thead>
<tr>
<th>Item (1)</th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
<th>7 (7)</th>
<th>8 (8)</th>
<th>9 (9)</th>
<th>10 (10)</th>
<th>11 (11)</th>
<th>12 (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>item (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>most important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>item (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>most important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>item (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>most important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>item (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Reporter**

Reporter Molly Dayton has been a news reporter for the Gazette newspaper for over a decade. Almost by accident, she learned that one of the candidates for Lieutenant Governor for her state, Grover Thompson, had been arrested for shop-lifting 20 years earlier. Reporter Dayton found out that early in his life, Candidate Thompson had undergone a confused period and done things he later regretted, actions which would be very out-of-character now. His shoplifting had been a minor offense and charges had been dropped by the department store. Thompson has not only straightened himself out since then, but built a distinguished record in helping many people and in leading constructive community projects. Now, Reporter Dayton regards Thompson as the best candidate in the field and likely to go on to important leadership positions in the state. Reporter Dayton wonders whether or not she should write the story about Thompson's earlier troubles because in the upcoming close and heated election, she fears that such a news story could wreck Thompson's chance to win.

Do you favor the action of reporting the story?
- ☒ Should report the story (1)
- ☐ Can't decide (2)
- ☒ Should not report the story (3)

**Rate the following issues in terms of importance.**
<table>
<thead>
<tr>
<th></th>
<th>Great (1)</th>
<th>Much (2)</th>
<th>Some (3)</th>
<th>Little (4)</th>
<th>No (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doesn't the public have a right to know all the facts about all the candidates for office? (1)</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>2. Would publishing the story help Reporter Dayton's reputation for investigative reporting? (2)</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>3. If Dayton doesn't publish the story wouldn't another reporter get the story anyway and get the credit for investigative reporting? (3)</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>4. Since voting is such a joke anyway, does it make any difference what reporter Dayton does? (4)</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td>5. Hasn't Thompson shown in the past 20 years that he is a better person than his earlier days as a shoplifter? (5)</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
<td>⬜</td>
</tr>
<tr>
<td></td>
<td>6. What would best service society? (6)</td>
<td>7. If the story is true, how can it be wrong to report it? (7)</td>
<td>8. How could reporter Dayton be so cruel and heartless as to report the damaging story about candidate Thompson? (8)</td>
<td>9. Does the right of &quot;habeas corpus&quot; apply in this case? (9)</td>
<td>10. Would the election process be more fair with or without reporting the story? (10)</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------</td>
<td>-------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Consider the 12 issues you rated above and rank which issues are the most important.

<table>
<thead>
<tr>
<th>Most important item (1)</th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
<th>7 (7)</th>
<th>8 (8)</th>
<th>9 (9)</th>
<th>10 (10)</th>
<th>11 (11)</th>
<th>12 (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second most important item (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third most important item (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth most important item (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cancer**

Mrs. Bennett is 62 years old, and in the last phases of colon cancer. She is in terrible pain and asks the doctor to give her more pain-killer medicine. The doctor has given her the maximum safe dose already and is reluctant to increase the dosage because it would probably hasten her death. In a clear and rational mental state, Mrs. Bennett says that she realizes this; but she wants to end her suffering even if it means ending her life. Should the doctor give her an increased dosage?

Q21 *12. Do you favor the action of giving more medicine?

- Should give Mrs. Bennett an increased dosage to make her die (1)
- Can't decide (2)
- Should not give her an increased dosage (3)

Rate the following issues in terms of importance.
<table>
<thead>
<tr>
<th></th>
<th>Great (1)</th>
<th>Much (2)</th>
<th>Some (3)</th>
<th>Little (4)</th>
<th>No (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Isn't the doctor obligated by the same laws as everybody else if giving an overdose would be the same as killing her? (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Wouldn't society be better off without so many laws about what doctors can and cannot do? (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. If Mrs. Bennett dies, would the doctor be legally responsible for malpractice? (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Does the family of Mrs. Bennett agree that she should get more painkiller medicine? (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Is the painkiller medicine an active heliotropic drug? (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Does the state have the right to force continued existence of those who don't want to live? (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>7. Is helping to end another's life ever a responsible act of cooperation? (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Would the doctor show more sympathy for Mrs. Bennett by giving the medicine or not? (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Wouldn’t the doctor feel guilty from giving Mrs. Bennett so much drug that she died? (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Should only God decide when a person's life should end? (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Shouldn’t society protect everyone against being killed? (11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Where should society draw the line between protecting life and allowing someone to die if the person wants to? (12)

Consider the 12 issues you rated above and rank which issues are the most important.

<table>
<thead>
<tr>
<th>Most important item (1)</th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
<th>7 (7)</th>
<th>8 (8)</th>
<th>9 (9)</th>
<th>10 (10)</th>
<th>11 (11)</th>
<th>12 (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second most important item (2)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third most important item (3)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth most important item (4)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q28 Please provide the following information about yourself:

Q29 Sex:
- Male (1)
- Female (2)
- Intra-sex (3)

Q74 What is your academic level?
- Sophomore (1)
- Junior (2)
- Senior (3)

Q31 What is your age group?
- 18-24 years of age (1)
- Over 24 years old (2)

Q32 Have you ever participated in The Student Government Association?
- Yes (1)
- No (2)

Q76 How long have you participated in Student Government?
- ____________________ # of semesters (1-8) (1)

Q33 Which position have you held in Student Government? Check all that apply
- Judicial Branch Member (Supreme Court) (1)
- Executive Board Member (2)
- Legislature/Senator (3)
- Agency Member (4)
- Committee Member (5)
- Honor Council Member (6)
- Officer of the SGA (7)
- Member at large (8)

Q33 Are you a member of Greek Life (Fraternity/Sorority)?
- Yes (1)
- No (2)

Q77 How long have you been a member of a fraternity or sorority?
- ____________________ # of semesters (1-8) (1)
Q34 Have you held a leadership position for your fraternity or sorority?
- Yes (1)
- No (2)
If No Is Selected, Then Skip To Have you participated in a structured...

Q36 How long have you held a leadership position for your fraternity or sorority?
- ____________________ # of Semesters (1-8) (1)

Q34 Have you participated in a structured internship requiring specific assignments that were graded by a professor?
- Yes (1)
- No (2)
If No Is Selected, Then Skip To Have you participated in a Faculty me...

Q78 How many hours per week did you work at your internship?
- ____________________ (Answer should be 1-40 hours [could be higher]) (1)

Q36 Have you participated in a Faculty mentored research project either participating on a research team or independent research while an undergraduate student at UM?
- Yes (1)
- No (2)
If No Is Selected, Then Skip To Thank you for your participation! Ple...

Q79 How many hours per week did you spend working on the research project?
- ____________________ Answer should be 1-40 hours [Could be higher] (1)

Q64 Thank you for your participation! Please go to the following web-page link to enroll in the raffle to receive UM Book store gift certificates.

LINK