

COLLEGE STUDENT HUMANITARIAN VALUES:
A COMPARISON OF THE IMPACT OF TWO LIBERAL ARTS CORE CURRICULA

DISSERTATION

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By

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ABSTRACT

This study examined the impact on student humanitarian values of two different approaches to the undergraduate liberal arts college core curricula. One institution required a traditional course distribution requirement to meet the core curriculum requirements ($N = 54$). One institution required the traditional course distribution requirement and a supplementary curricular intervention strategy that emphasized examination of personal values and the values of other individuals and groups ($N = 59$). Data were obtained using a nonrandomized comparison-group pretest-posttest design. The Schwartz Value Survey was the measurement instrument. Students at the two universities were pretested in the first week of the second semester of enrollment, at the beginning of the four-course intervention sequence. Students were posttested at the two universities at the conclusion of the fifth semester of enrollment and at the conclusion of the fourth course in the intervention sequence. Results revealed supportive evidence for the hypothesis that the students required to complete the traditional course distribution and supplementary curricular strategy humanitarian values increased more than students required to complete only the traditional course distribution. However, the weight of the evidence did not support unequivocally that the specially designed curriculum was solely responsible for the student humanitarian value pretest-posttest differences.

Dedicated to my family

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CHAPTER 1

INTRODUCTION AND THE PROBLEM OF THE STUDY OF THE IMPACT OF GENERAL EDUCATION CORE CURRICULUM ON STUDENT HUMANITARIAN VALUES

The purpose of this study was to compare the impact of two distinctive liberal arts general education core curricula on student humanitarian values. In this research context the concept of humanitarian values was defined by the recognition of the equivalence of values between one's own loyalties and those of all other individuals and groups. Further, it is the respect granted to others freely to express similar causes and loyalties without infringement (Royce, 1908; Locke, 1989; Schwartz, 1992). In other words humanitarian values includes advancing the fundamental liberal values of individual liberty and respect (Halstead, 1996) that reflect "... interest in... and the sensitiveness to the rights and claims of others – conscientiousness" (Dewey, 1916, pp. 285-286).

When we ask about the relationship of a liberal education to the cultivation of humanitarian values, Nussbaum (1997) states the following:

We are drawing on Socrates' concept of the "examined life," on Aristotle's notions of reflective citizenship, and above all on Greek and Roman Stoic notions of an education that is "liberal" in that it liberates the mind from the bondage of habit

and custom, producing people who can function with sensitivity and alertness as citizens of the whole world. This is what Seneca means by the cultivation of humanity (1997, p. 8).

The general education core curriculum is the center of the formal learning processes in a liberal arts education. The general education core is designed to meet the purpose, goals and objectives of an educational institution. The general education core curriculum, as expressed by Clark Kerr in his introduction to Frederick Rudolph's seminal work *Curriculum*, "...is nothing less than the statement a college makes about what, out of the totality of man's growing knowledge and experience, is considered useful, appropriate, or relevant to the lives of educated men and women at a certain point in time" (1970, p. ix). The content of the general education core curriculum in America has been the judgment of what key institutional stakeholders identify as the requisite knowledge, skills and personal qualities that define what it means to be educated. As a result there has been continuous debate and change in the content of the general education curriculum in order to meet the ever-changing social needs and expectations (Gaff, 1991; Jencks and Riesman, 1968; Rudolph, 1970; Rudy, 1960; Veysey, 1965).

Globalization is an emerging theme that is relevant for educated men and women in the new American reality. Global forces and multicultural influences are transforming the constitution of our public and private culture. Pressing individual and societal challenges are borne from these transformations. The convergence of international and national social-cultural phenomenon has imposed new sets of expectations on colleges and is inspiring a widespread movement by college faculty and administrators to revise the general education curriculum. Global uncertainty and cultural pluralism has become

a seed of change and the focus of the reexamination and curricular transformation of academic core content in American higher education. If liberal arts higher education is to fulfill a social responsibility to look anew at the complexities of globalization, then adaptation of the core curriculum is appropriate. "...[U]niversities cannot avoid the task whether or not they relish the responsibility. The only question is whether they choose to proceed blindly and ad hoc or with careful forethought" (Bok, 1990, p. 79).

The two institutions participating in the study, Farleigh-Dickinson University (FDU) and Ohio Wesleyan University (OWU), share the broadly accepted social responsibility of higher education in America to influence student values (Dewey, 1909; Jacob, 1957; Morrill, 1980; Rokeach, 1973; Rosovsky, 1990; Rudolph, 1970). Similar to more than ninety percent of the institutions of higher education in America, FDU and OWU require the fulfillment of a general education core distribution sequence that includes exposure to the social sciences, natural sciences, humanities, writing and a foreign language (Hurtado, Astin and Dey, 1991). However, FDU requires as a part of the core curriculum an additional four-course intervention sequence that exposes students to some of the basic issues that faculty and administrators have identified as central for students living and working as global citizens in the 21st century.

The institutional purpose to influence student values was not the distinction that separates the two private liberal arts universities participating in the research study. Rather, it was the curricular intervention strategy implemented by FDU. The purpose of the FDU supplementary core intervention sequence was to have students "begin to examine [their] own values while becoming aware of the differing values of other individuals, groups, and cultures" (Farleigh-Dickinson University, 1999). The four-

course intervention sequence was organized around themes to help students grasp and negotiate the transforming interrelationships affected by living in a global community. The FDU core sequence focuses on the common needs and experiences of all people within and among cultures. Students become informed by developing a social scientific understanding of how individuals and societies function and a historical knowledge of differing cultural traditions that together have led to the current social-cultural problems.

These courses, which are meant to create a progressive awakening to the contexts in which we live, begin with perspectives on the individual. They move on to a study of the individual's place in American society, then examine the world from a cross-cultural perspective, and conclude with an investigation of global issues (FDU, 1999).

The curricular reform efforts in college's and universities are recognition of the tremendous social responsibility of liberal arts higher education to prepare students to meet the challenges of living in an increasingly interdependent world. In response to these challenges and problems, The Association of American Colleges continues to sponsor a reform project that began in 1989. The project involved sixty-three institutions engaged in core curriculum development or revision. The intent of the project, *Engaging Cultural Legacies: Shaping the Core Curricula in the Humanities*, is to "...address this curricular need in its local, national, and international dimensions while simultaneously reinvesting in core curricula as a foundation for undergraduate education" (Schmitz, 1992, p. 1). Various curricular adaptations attempt to address the learning necessary for students to participate effectively in a global environment. An important outcome of The *Engaging Cultural Legacies* project is the process colleges and universities used to

determine what core courses are important. A selection of core curricular models that include the rationale and adaptations are included (Schmitz, 1992). Thus, the project is aiding others colleges involved in curricular reform by providing examples of a variety of curricular models. The Engaging Cultural Legacies project guided the selection of FDU as a sample site for this research.

The underlying assumption in curricular reform is that "...the curriculum responds to that society and in turn shapes that society" (Rudolph, 1970, p. 7). The problem with this assumption is that research findings on the impact of the curriculum on shaping student values do not consistently support that the educational purpose is achieved (Jacob, 1957; Levine, 1980; Pascarella and Terenzini, 1991). This research is an attempt to provide information about the impact of one core curricular reform project compared to a traditional core curriculum on shaping student humanitarian values.

The Schwartz Value Survey (SVS) was used to measure student value change at FDU and OWU, the two liberal arts universities participating in this study. The SVS has been widely used to assess value hierarchies of individuals and groups that are diverse in language, geographical region and culture (Schwartz 1994, 1992). The purpose for selecting the Schwartz value survey is to overcome the flaw of secondary analysis that plagues the recent research of the impact of college on student value change (Pacarella, Ethington and Smart, 1988). Researchers' recognize the methodological and conceptual weaknesses of data that may have been collected for purposes quite different from a researcher's original aim (Grandy, 1988). The data for this research was collected for the specific purpose of measuring values.

Schwartz distinguishes values by the type of motivational goal they express. He proposes a typology of values that people use to establish priorities to inform choice across cultures. Values are defined by Schwartz "as desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity" (1994, p. 31). Expanding on the concept of values as goals, Schwartz (1994) describes values as serving interests of some social entity; values motivate action – giving direction and emotional intensity. Values function as standards for judging and justifying action and are acquired both through socialization to dominant group values and through the unique learning experiences of individuals.

The groups of values in the Schwartz typology that were of particular interest to this research were the universalism, benevolence and security type values. The universalism, benevolence and security type values reflect the value contents of the definition of humanitarian values used in this research context. That is, the content of humanitarian values reflect the values of loyalty to the self and others and the commitment to the causes of human prosperity. The goals expressed by the universalism, benevolence and security type values are motivations related to social stability, environmental preservation, and the understanding, appreciation, tolerance and the welfare of all people (Schwartz, 1992).

This study is important in higher education because colleges have a tremendous responsibility to take a leadership position in the emerging pluralistic global society by cultivating in students the skills, attitudes and values of being responsible world citizens. Education for humanitarian values is needed because of the promise and uncertainty posed by the onset of globalization. Of major concern is that, while we live in a

multicultural environment, each segment of society tends to retain its own values and regard those values as sacrosanct and its own needs paramount (UNESCO, 1988). The consequences of disparate power and disconnection in the form of human conflict, environmental abuse, nuclear armaments, world hunger, poverty, violence and war threaten our very existence. The perilous compromises of disunity can be seen as a call to higher education to create a pedagogical strategy for a "... global curriculum which will nurture understanding and commitment to a world society... we are going to have to learn to live together or perish together. It is international community - or international chaos" (Passow & Schiff, 1989, p. 68).

Higher education is in a position to do something about the problems inherent in globalization and the need for respect for diversity (Astin, 1992; Ikenberry, 1997). Higher education institutions cannot escape the social responsibility to reflect on humanitarian values. The research focus on the outcome of educating for humanitarian values is timely and complements current trends in higher education. This research study will focus on student humanitarian values by measuring and comparing the impact of FDU's intervention core strategy and general education core curriculum to the OWU general education curriculum. Educators need comparative outcome data on the various core course approaches in order to assess whether institutional purpose has been achieved. This study may be of interest to any person interested in general education core curricular design and the development of the values of humanitarian citizenship in students.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE ON THE IMPACT OF THE COLLEGE CURRICULUM ON STUDENT HUMANITARIAN VALUES

There is little argument in the literature that one of the central purposes of a liberal arts education is to shape the values of students (Astin, 1992; Bowen, 1977, Chickering, 1969, Dewey, 1916; Etzioni, 1993; Gaff, 1991; Hutchins, 1949; Ikenberry, 1997; Morrill, 1990; Terry, 1992; Thomas, 1993). However, the research measuring the impact of college on student value change is inconclusive in determining whether higher education is effective in achieving this central purpose (Eddy, 1959; Feldman and Newcomb, 1970; Hyman and Wright, 1979; Jacob, 1957; Levine, 1980; Pascarella and Terenzini, 1991). Pascarella and Terenzini (1991) critique the literature related to the impact of the college curriculum on student value change and suggest that it is inconclusive due to poor experimental design, poor instrumentation and restricted samples. Due to research design limitations uncertainty exists when attempting to discern precisely the conditions under which value change in students occurs and whether the dynamics of the college experience that produce them are original.

... it is clear that students change during the college years in a variety of ways

consistent with the promotion of citizenship and responsible participation in a democratic society. These changes are modest in size, however, and they tend to be smaller than the changes in learning and cognitive skills. These changes occur in students' sociopolitical attitudes and values, including gains in altruism, humanitarianism, social conscience, and civic activity... (Terenzini, 1993, p. 16)

Notwithstanding the modest shifts in student values during college, Pascarella and Terenzini (1991) warn that the net effects of college on student value change are contradictory and difficult to attribute solely to college attendance and instead may be a result of influences such as normal maturation.

The body of this review of the literature comprises three main sections that present a chronological evolution of research allied to the impact of the college core curriculum on student humanitarian values. A fourth section is a review of the related literature that used the SVS instrument to measure college student values. A fifth section will summarize the limitations of the literature on the impact of college on student values and how the limitations guided the design of this research.

The first two sections consider foundational research that relates to the impact of the curriculum on student value change or moral development. The first section is a review of the impact of major fields of study on student value change. The research interest in major fields of study is, in part, a response to the disappointingly modest results of research conducted from the 1920's to the 1950's on the impact of college attendance on student values reported by Jacob (1957). The second section is a review of curricular intervention strategies and the impact of individual courses on student value change or moral development. The research that focuses on student moral development

was conducted primarily in the 1970's and 1980's and represents the influence of Kohlberg's theory on higher education pedagogy. The third section examines the literature available on the impact of college attendance on humanitarian student value change conducted from 1991. The national data base used in the analysis for humanitarian student value change in the 1990's was collected by the Cooperative Institutional Research Program (CIRP). CIRP is a research program dedicated to the study of student trends in higher education.

The SVS has been used in a variety of settings to examine individual and group value priorities. A fourth summary section will review the literature of the studies that have used the SVS measurement instrument to examine the value priorities of college students. The study of college impact presents some complex assessment issues that are reviewed in the fifth section. The problems of assessing the net effects of college attendance on student values will be summarized.

The Impact of the Major Course of Study on Student Value Change

The major field of study is the focus of concentration in the curriculum for undergraduate students. Therefore, when considering the impact of the curriculum on student value change the major course of study is a particularly salient variable for analysis. The research that examines the impact of exposure of academic major fields of study on student value change are sporadic and the results ambiguous (Feldman and Newcomb, 1970; Jacob 1957; Pascarella and Terenzini 1991; Terenzini, 1993; Thistlethwaite, 1973). Feldman and Newcomb (1970) in their comprehensive review of the literature on the impact of the major field of studies prior to the 1970's state that the:

... studies have shown that students in various major fields can be distinguished in terms of certain values... but [the major field studies do] not directly deal with the question of differences in impact of the various major fields, either within or across institutions (p. 175).

The conceptual framework underlying the research of the impact of the major course of study on student values is consistent in approach except for a segment of research that adds a single important supposition. The basic framework of the research was that students enter college with certain values, are exposed to varying influences including the academic major curriculum and student values change or are maintained during the college experience (Weidman, 1979). The additional supposition was that students with similar values matriculate to particular academic majors and that the major field of study accentuates existing student preferences (Thistlethwaite, 1973; Feldman and Weiler, 1976). The research in this portion of the review will be restricted to research that used value measurement instruments (e.g., Allport-Vernon-Lindzey Study of Values) rather than personality measurement instruments (e.g., Omnibus Personality Inventory) or attitude measures that evaluated contemporary socio-political issues (e.g., Test of Critical Thinking in Social Science and Political Economic Progressivism Scale).

The design of the research evaluating the impact of the major course of study centered primarily on research of within college effects with single sex samples. (Arsenian, 1943; Huntley, 1967; Terenzini, 1993; Whiteley, 1933). The majority of the studies used the Allport-Vernon-Lindzey (A-V-L) study of values as the measurement instrument, the most used value measurement instrument prior to 1970 (Astin, 1977). The A-V-L study of values is designed to measure the relative importance of six types of

values based on the six basic interests of personality: theoretical, economic, aesthetic, social, political and religious (Spranger, 1928; Whitely, 1933). Values are defined by Allport-Vernon-Lindzey to be a cluster of attitudes organized around a conception of the desirable. The A-V-L study of values instrument similar to the Schwartz Value Survey (1992) measures the relative importance of values to the individual, rather than the absolute importance of each value. The social value attitude, which logically is similar to Schwartz's universalism, benevolence and security value types, is defined by Allport-Vernon-Lindzey as follows:

The highest value for this type is love of people. In the study of values it is the altruistic or philanthropic aspects of love that is measured. The social man prizes other persons as ends, and is therefore himself kind, sympathetic, and unselfish. [...] The social person regards love as itself the only suitable form of human relationship (1970, pp. 4-5).

Three studies were found that considered the impact of the major fields of study on student value change. Using the Allport-Vernon-Lindzey study of values, the researchers attempted to confirm the broadly accepted assumption that values are inherent in the subject matter, motivation and consequence of instruction (Jacob, 1957). The conceptual framework of the research studies was that students enter college with certain values, are exposed to varying influences including the academic major curriculum and student values change or are maintained during the college experience. Students were separated into groups according to major field of study for analysis. The division of major field groups varied from two (Arsenian, 1943), four (Whitely, 1933), and nine (Huntley, 1967).

At Springfield College (Arsenian, 1943) 76 students participated in a four-year study that compared social science majors and health and physical education majors. At Franklin and Marshall College (Whitely, 1938) 84 students participated in a 3 month 10 day study that compared students interested in the natural sciences, arts and literature, social science and business. According to Feldman and Newcomb (1970), prior to 1970, the most comprehensive data on four-year value change related to the major field curriculum was presented by Huntley (1967). All entering freshman students at Union College for a six year period ($N = 1027$) completed the A-V-L study of values. The students were divided into nine major fields of study; humanities, social studies, science, premedical science, premedical arts (students who switched majors to humanities or social studies), chemistry, physics, industrial administration and engineering. The values that students enter college demonstrate a level of consistency for the major field of study and type of institution students selected. Initial scores on the A-V-L study of values of students indicate differences in value structures and patterns and significantly greater variations than at graduation (Huntley, 1967). This conclusion affirms that value patterns and structures preexist in students prior to college entrance and selection of major field of study. As an example, the most pronounced variation in scores among the academic groupings were the relatively higher theoretical scores for natural science students and higher economic scores for business students (Whitely, 1938). The process of institutional self-selection was also noted at Franklin and Marshall where a deviation from the norm scores of the A-V-L study of values was disclosed in the results. The mean religious score for the Franklin and Marshall students was significantly higher in the pretest trial than the norm for the male population (Whitely, 1938). Whitely made the

assumption that the higher mean difference can be explained by Franklin and Marshall's church affiliation.

It was assumed that exposure to different major fields of study would have a distinctive impact on student values. There were some serious limitations in the research design of the studies in the review of the literature that were a cause for caution when analyzing the data. The research design limitations in the study of students attending Franklin and Marshall were that there was a duration of only 3 months and 10 days between administration of the pretest and posttest, the unequal time in the major (juniors and seniors were tested) and the major study field groupings lacked precision defined by 'intellectual interest'. The conclusions of the study of Springfield College students must be considered narrow with the inclusion of just two academic majors. Moreover, both the Franklin and Marshall and Springfield College studies presented only mean whole group comparisons that may have concealed significant individual changes or indirect influences (Pascarella and Terenzini, 1991). Huntley (1967) attributed the lack of significant difference in student value change in previous studies as a failure "...to recognize that value scores for different curricular groups may change in opposite directions, thus showing little or no significant difference when one contrasts all freshmen with all seniors..." (p. 375).

Huntley (1967) addresses the limitations of the previous research and presents separate data for each of the nine different major fields of study. In addressing the research limitations Huntley determines that specific to the Union College population there were changes in values scores during the college years. However, in a comparison of the nine major fields the student values change remained nearly the same over the four

years of college attendance consistent with the previous studies (Arsenian, 1943; Whitely, 1933). The impact of college on student value change showed slight increases in aesthetic values and similar decreases in religious and economic values over the college experience but the changes cannot be attributed to the curriculum (Arsenian, 1943; Huntley, 1967; Whitely, 1938).

Research revealed that students have already established distinctive value patterns prior to college entrance and selection of major field of study. In general, after four years of college the same value patterns exist and the value differences between entrance and graduation tend to be accentuated leading to the hypothesis that there was a general trend of convergence of the values of students during college. Huntley (1965) summarizes that “...one is led to hypothesize that, during the years of college, there is a drift toward the central values” or the values that are mutual with the student population (p. 382).

The conclusion that student background characteristics influenced selection of academic major and remained constant or became more pronounced influenced the research of Thistlethwaite (1973) and Franks, Falk and Hinton (1973). The hypothesis that there was a drift or accentuation toward central values was supported by a study conducted by Franks, Falk and Hinton (1973). Franks et al (1973) compared value responses to the Social Values Test (Meyer, 1962) between students with a different number of exposures to major courses in sociology and business. The changes in value responses were more evident when comparing the number of classes that students had completed in the major than by difference in class year. The conclusion of Franks et al is supported in the Feldman and Newcomb (1970) overview of the literature of the impact of the major field of study.

The evidence is clear... that different experiences in the several major fields do have impacts beyond those attributable to initial selection in the these fields...

The most convincing evidence of this is the prevalence of the accentuation of initial major-field differences. It has been shown that pre-existing differences in characteristics typical of students initially choosing different curricula tend to become more pronounced following experience in those major fields. Since this is unlikely to happen by sheer chance, it constitutes a real impact – even though one invited, so to speak, by the student himself (p. 193).

Thistlethwaite (1973) found contradictions in his research that major fields of study accentuate student values. Thistlethwaite noted limitations of earlier studies that included a lack of distinction between the students who start and remain in a particular curriculum from those students who change from their initial major curriculum. The subjects, all male, were randomly selected from 25 universities both public and private that had a minimum enrollment of 5,000 students in the fall of 1968. One subject group was comprised of freshman and the other subject group had junior standing. The patterns of mean change for the major fields of study between the two groups were calculated. The results revealed that the major field of study did not typically differentiate between students enrolled in the sciences from students enrolled in the humanities. Thistlethwaite's results are distinctive from Huntley (1967) and Franks et al (1973) in that the results did not demonstrate progressive differentiation between the scientific and humanistic curricula across 25 universities rather than at one institution.

In a more recent study Weidman (1979) considers the impact of “nonintellective socialization” within an academic department on student values. Weidman employed the

academic department organizational model designed by Vreeland and Bidwell (1966) to analyze the impact of socialization on student values. Vreeland and Bidwell (1966) hypothesized that the academic departments that influence change in student values would be the departments that establish specific goals to develop student values. In the study they consider the impact of two variables in analyzing departmental effects, types of goals and departmental attributes related to faculty commitment and student interaction with faculty and peers. Based on faculty interviews, departmental goals were classified into content and moral categories as well as a coding system describing faculty-student interaction. The classification system provided an organizational model to examine the socializing power of the academic department. Weidman's (1979) research did confirm Vreeland and Bidwell's (1966) hypothesis that the academic departments that influence change in student values were the departments that establish specific goals to develop student values. However, the student value changes were found only to be peripherally related to those goals expressed by the faculty.

Weidman (1979) used the data from the national surveys sponsored by the American Council on Education and the Carnegie Commission on Higher Education. The survey was administered to freshman in the fall 1966 and repeated in December 1969. The results of the research further strengthened earlier research supporting the conclusion that the background characteristics of students were the most reliable predictors of college effects and that students' aesthetic values increase and economic values decrease in college.

The results of the review of the literature on the impact of the major fields of study on student value change in the present context was consistent with Jacob's (1957)

literature review on college impact on student values. Jacob's (1957) review revealed little consistent evidence to support the assertion that student value systems change as a result of the major field of study or a particular curricular pattern of general education. Jacob (1957) warns that it was likely that influences such as self-selection were the causes for student value change in the few instances that suggest a purposeful and organized general education program had an impact on student value change.

This study has not discerned significant changes in student values which can be attributed directly either to the character of the curriculum or to the basic courses in social science which students take as part of their general education. For the most part, the values and outlook of students do not vary greatly whether they have pursued conventional liberal arts program, an integrated general education curriculum or one of the strictly professional-vocational option (Jacob, 1957, p. 5).

Jacob (1957) concluded were that student values do change in college but the change was attributed to institutional climate, institutional environment, personal characteristics of the instructor and student background characteristics rather than the curriculum or teaching methodology (Jacob, 1957).

In conclusion, the general assumption that the diversity of curricular content in the academic major will produce a differential effect on student values appears to be unfounded. Rather, what did emerge from the research on the impact of the major field of study was a stabilization or in some research studies accentuation of student values. Student background characteristics were found to be the most significant determinants of the impact of the major field of study in selection and change in student values. Student

value change was likely to be related to institutional characteristics such as size, specific purpose, climate, residence structure and religious affiliation rather than curricular experiences.

Curricular Intervention Strategies or Individual Course Impact on Student Values or Moral Development

The intent of curricular intervention strategies or single course designs to impact student values often was an attempt by the college to develop students who could think critically, act morally and/or to address contemporary social issues. The intervention strategies and courses were an adaptive mechanism exercised by higher education faculty to cope with rapidly changing social demands. The intended outcomes of the innovative course interventions were the acquisition of the qualities necessary for students to live and work effectively in a changing society, the qualities of an educated person.

The review of the literature on the impact of college on student values in this section will focus on the effectiveness of particular courses or course interventions concerned with social value issues or moral judgements rather than literature that considers cognitive change from course subject matter. The course content provides the context for this review; however, the assessment of the impact of the particular course or intervention strategy on student value change was the condition for inclusion in the review.

The sources for the literature review prior to 1957 were taken primarily from the bibliography of Jacob's book on changing values of students in college. Course objectives relevant to the time period incorporated themes relating to American race

problems, human relations' problems and the liberalizing of student attitudes (Gerberich and Jamison, 1934; Kelley and Pepitone, 1952; Salner and Remmers, 1933; Young, 1927). The academic departments of economics, social sciences and psychology at M.I.T., Purdue, University of Pennsylvania, Chicago and University of Arkansas offered the specially designed courses as a part of the undergraduate curriculum. Pretest and posttest measures were administered at the beginning and end of the term of each course. The measurement instruments were varied and included instructor designed questionnaires, case studies and Harper's Social Study (1927). The instruments were designed or selected to evaluate the direction of student change impacted by the concepts, theories and social issues presented in the course.

No consistent conclusions emerged from the research; however, greater decisiveness in attitude was in evidence as was intellectual development. Student values, however, remained relatively constant through the duration of the course (Gerberich and Jamison, 1934). When student change did occur, there was a problem of isolating the particular components of the course responsible for the change. The results of the investigations indicated that the attitudes of the college students tested became more liberal with the conclusion that the amount of change was a function of the particular course (Gerberich and Jamison, 1934; Salner and Remmers, 1933). In the evaluation of the impact on students in the course on human relations' problems the trend of the results, although not statistically reliable, suggested that attitudes changed in the direction of greater tolerance as students increased understanding of the underlying causation of human conflict (Kelley and Pepitone, 1952).

Since the 1970's through the 1980's the dominant literature related to college student values used Kohlberg's (1969) theoretical framework on moral development (Pascarella and Terenzini, 1991). According to Terry (1992), there was a gap in the literature on the impact of college on student value change during the 1970's and 1980's. The impact of college on student values literature was supplanted by the impact of college on moral development as defined by Kohlberg's moral development theory. The prominence of the application of Kohlberg's theories coincided with the contentious socio-political events of the 1960's. Nationally escalating racial tensions, the Viet Nam war, campus strife and the underlying liberal arts tradition to educate for values inspired a curricular movement in higher education to elevate student moral consciousness. The prevalence of the application of Kohlberg's theory was a consequence of the commitment of higher education to maintain the early traditions of developing the whole person and a response to current social issues.

There continues to be a presumption that the college experience and liberal education in particular should contribute not only to cognitive development but also to an expansion of the student's worldview and the capacity to apply reason and intellect to interpersonal, political, social, and ethical questions as well as to purely academic ones (Pascarella and Terenzini, 1991, p. 336).

The most extensive research review focusing on the impact of educational intervention on student moral reasoning was conducted by Schlaefli, Rest and Thoma (1985) who reviewed fifty-five studies. The studies reviewed students from a variety of institutions and academic disciplines at different stages of fulfillment of graduation requirements. All studies used the Defining Issues Test (DIT), (Rest, 1976) to measure

moral development. The DIT is a multiple-choice test used to measure principled reasoning as defined by Kohlberg. Effects were studied by comparing experimental groups that received some sort of educational intervention to comparison groups that did not receive any deliberate educational intervention. Schlaefli, Rest and Thoma (1985) conclude that the overall power of moral education programs taken together was statistically significant but small. Additionally, longer intervention duration treatments (13 to 28 weeks) had no more effect than the medium duration treatments (4 to 12 weeks). The major conclusions were: (1) Moral education programs emphasizing Kohlberg's recommended dilemma discussion and those emphasizing personality development both produce modest but definite effects, with the dilemma discussion method having the slight edge. (2) Academic courses in the humanities and social studies without deliberately designed intervention strategies do not seem to have an impact on moral judgment development. (3) Programs with adults who are 24 years and older seem to produce larger effect sizes than programs for younger subjects; however, several artifactual explanations may account for this trend. (4) Effect size was related to exposure to Kohlberg's theory and recommended intervention strategies. Whether this was test contamination or true developmental change needed to be determined. (5) Interventions longer than 12 weeks had no more impact than interventions of 3 to 12 weeks; however, duration's less than 3 weeks tended to be ineffective when measuring moral judgment by the DTI. (6) Similar trends were obtained when studies were aggregated as good or bad studies.

Walker (1984) conducted a critical review of the research focusing on sex differences in moral reasoning based on the alleged sex bias (Gilligan, 1977) in

Kohlberg's theory of moral development. The review examined, in part, sex differences in moral reasoning in late adolescence and adulthood. The research focused on studies of the development of moral reasoning between the sexes that used Kohlberg's method of assessment, the Moral Judgment Interview (MJII). The conclusions indicated that the moral reasoning of males and females was more similar than different and nonsignificant (Walker, 1984). Gilligan's (1977) criticisms were not supported.

There were two college moral intervention studies that have particular relevance to this research because of the similarities in curricular purpose and design in a liberal arts college environment (Berson, 1979; Mustapha and Seybert, 1990). Groups of student volunteers were enrolled in two separate and distinctive general education programs at Fordham College in New York City (Berson, 1979) and William Jewell College in located in Liberty, Missouri (Mustapha and Seybert, 1990). The purpose of the research was to compare the impact on student moral reasoning between a specially designed intervention curriculum and the traditional curriculum design at the same institution. The experimental curricula were interdisciplinary in design and inspired by a concern about student value development and ethical decision making. The curricular sequences at both Fordham and William Jewell were longer than a single academic term in length.

The results of the two studies were different. At Fordham College the students enrolled in the experimental values program curriculum demonstrated no differential effect in moral judgment measured by Kohlberg's MJII when compared to the students enrolled in a moral philosophy course. Berson (1979) concluded that the poor results of the experimental values program on development of student moral judgment as a

reflection of a lack of faculty and institutional commitment. The conclusion was based on the opinion that the program lacked institutional consensus and faculty commitment to the values program and on reactions of students in the interview. At William Jewell College (Mustapha and Seybert, 1990) the results of DIT revealed more advanced levels of principled moral reasoning for the students enrolled in the experimental curriculum than those in the traditional curriculum. The experimental curriculum teaching methodology at William Jewell College was based on Kohlberg's peer dilemma discussion, a method that had shown positive effects in facilitating student moral development in earlier research (Beck, Sullivan and Taylor, 1972; Blatt and Kohlberg, 1974; Turiel, 1974). The implications of the study were consistent with previous studies that show specific educational practices based on upon moral development theory do facilitate development of moral reasoning (Whiteley, Berlin, Hennings, Lee, Magana and Resnikoff, 1982; Wilging and Dunn, 1982). The William Jewell College (Mustapha and Seybert, 1990) study was unique in that it demonstrated that principled moral reasoning may be enhanced by a specially designed four-year intervention sequence based on moral development theory.

In a rare between college study Terry (1992) examined the values systems change of entering freshman in the fall of 1988 after one semester of enrollment at a large public university and a small denominational college. The measurement instrument used in the study was the Allport-Vernon-Lindzey study of values. Scores from the pretests were statistically compared with individual scores from the posttests to determine whether there had been changes in value scores during the first semester within each institution. The statistical analysis of difference scores indicated no significance for any of the A-V-

L variables. The results of this study suggest that student values systems have a role in the type of institution that students select, that is, students who selected a private college affiliated with a religious denomination had high religious values and students with high political values select a public university. The results may be further interpreted to indicate that the institutional influences at both the public university and private college were not strong enough to change student values in the first semester of college attendance. On the other hand, Feldman and Newcomb (1970) hypothesized that freshman students, due to the challenges of adapting to a new environment, may retreat to previously established safe value systems until later in their college careers. The demands of adaptation to the freshman experience may have prevented any significant value change while the student attempts to maintain stability in a new environment.

Examining whether sophomore, junior and senior students would be more likely to be open to change, Boyd (1980) and Page and Bode (1982) measured change in moral reasoning using the Moral Reasoning Inventory (MRI) for students who were exposed to specially designed academic courses at a large state university into the courses compared to students in courses without special designs. The courses, a philosophy and a psychology course, integrated ethical theory. In the Boyd (1980) study discussion of Kohlberg's theory was included in the philosophy course. In contrast, in the Page and Bode (1982) study, there was no discussion of Kohlberg's theory but the design included discussion of other ethical theories such as utilitarianism and Kantianism. Similar results were found in both studies and indicated that courses that had a purposeful integrated emphasis concerning ethical inquiry led to increases in moral judgment development. The developmental changes were statistically significant in Page and Bode's study (1982)

and moderate change although not statistically significant in Boyd's study (1980). Students in the comparison groups did not demonstrate the same degree of moral development.

In sum, there is some evidence that a college's attempt to address social issues through innovative curricular programming or course intervention strategies impacts student moral development or value change. Several factors emerged in the research literature. Firstly, as recommended by Kohlberg, incorporating dilemma discussion in teaching methodology appeared to be of benefit in several studies. However, teaching strategies that use ethical, personal and social value issues were shown rarely to impact student beliefs. Secondly, the timing of the intervention in the undergraduate experience may be an influence in a student's receptiveness to change. Upper class students were more likely to be open to change than first term freshman students. The duration of the course intervention influenced the impact on student change. No differential effect was determined in course interventions that were less than three weeks. Modest effects were obtained in course interventions that extended between three to twelve weeks. There were mixed conclusions on the impact on student change in the research literature when the course interventions extended beyond twelve weeks or over several semesters.

Thirdly, when student value or moral development change was observed isolating the components responsible for the change was a problem. Small sample size, variable course content, instructor influence and student institutional and course selection bias were examples of mediating effects noted by researchers that made the conclusions suspect.

The Impact of College on Humanitarian Student Value Change

The social impact of globalization and the politics of human rights in the last two decades have inspired specific research on the impact of college on student humanitarian values. The most comprehensive research on this subject was conducted by Pascarella, Ethington and Smart (1988). The research considered direct and indirect influences in "the process by which different student background characteristics, [and] college experiences ...influence student development" (Pascarella, Ethington and Smart, 1988, p. 414). Pascarella, Ethington and Smart (1988) use the definition of values promoted by Rokeach (1973): "a type of belief, centrally located within one's belief system, about how one ought or ought not to behave, or about some end-state of existence worth or not worth attaining" (1993, p. 124). Implicit in this definition according to Pascarella, Ethington and Smart (1988) was that values exist as a result of the influence of an individual's family, ethnicity, achievements, occupations, and interactions. Accordingly, student precollege characteristics and the type of institution attended would influence important value dimensions of a student's experience (Lacy, 1978; Tinto, 1975; and Chickering, 1969).

Pascarella, Ethington and Smart (1988) used regression to analyze the effects of student precollege traits, structure of the college attended and the college experience effects on value change. Hence, the direct effects of the relative impact of the college experience on humanitarian values could be analyzed. The results suggest that in addition to precollege characteristics, a student's social involvement outside of class was a primary mechanism in promoting humanitarian values.

Similarly, Astin and Kent (1983) report on a longitudinal study of value change over a nine-year period. Astin and Kent (1983) statistically controlled for precollege differences including attitudes regarding degree aspiration and interaction with faculty or administration. The significance of the study was the conclusion that knowing and interacting with a faculty member or an administrator outside of class had a positive association with humanitarian values nine years after initial enrollment in college.

Rhee and Dey (1996) repeated and extended the research of Pascarella, Ethington and Smart (1988) by using the CIRP data from a more recent cohort of students between 1985 and 1989. Rhee and Dey (1996) were influenced by Astin's (1970) model of involvement as an explanation of how students develop and Pascarella's (1985) behavioral suggestion that change is a function of students' background characteristics, effort and socialization. Rhee and Dey (1996) also examined Pascarella's (1985) belief that the organizational structure of an institution has an indirect influence on student development. Rhee and Dey (1996) posed the following questions:

- (1) Do students who are more involved in college activities have better humanitarian values than those with less involvement, controlling for gender, race/ethnicity, socioeconomic background, major field of study, and prior civic values development?
- (2) What organizational characteristics of a college are associated with civic values of students? How do differences among colleges in their organizational characteristics influence the humanitarian values of students (1996, p. 3)?

Additional independent variables studied by Rhee and Dey (1996) were gender, ethnicity, and three institutional characteristics in which the student initially enrolled (2

or 4 year institution; public or private; and institutional selectivity determined by average combined SAT or ACT equivalent scores, ≤ 999 and $\geq 1,000$, of entering students). The researchers controlled for precollege characteristics including initial value status, degree aspirations, family socioeconomic status, age and political orientation. Further, it was hypothesized that different types of colleges tend to recruit and enroll different kinds of students. Consequently, in comparing student outcomes recruitment effects were different from socialization effects; the former were the result of selection, while the latter refer to the actual effects of attending different colleges.

Rhee and Dey (1996) reported the following conclusions on the impact of student involvement and college organizational characteristics on student humanitarian values: (1) Student civic development was enhanced with greater peer contact. (2) There was a positive association between politically active campuses and civic values of students. (3) Church-affiliated colleges showed a positive relationship to college student civic values.

McLaughlin and Smart (1987) used the CIRP longitudinal data to study civic orientations of college graduates who earned a minimum of a bachelor's degree. The study was an extension of Astin's (1977) study of the developmental patterns of college students and Smart, McLaughlin and Ethington's (1985) study of the developmental patterns of high school graduates with varying levels of exposure to college. The purpose of the study was to determine whether the humanitarian value changes were descriptive of (1) students enrolled in different types of colleges and (2) for men and women graduates. The random samples of colleges were stratified by selectivity, race, religion, sex, institutional control or Carnegie classification and highest degree offered. Repeated

measures were also used to account for initial value status. The findings revealed that major differences existed on entry to different kinds of colleges.

Knox, Lindsey and Kolb (1993) used as their data base the National Longitudinal Study of the High School Class of 1972 (NLS -72) to review a wide range of outcomes of postsecondary educational attainment including the impact of college on student values. The results revealed that earning a college degree enhanced participation in political and community activities but not volunteer work. Further, a college education slowed down the decline in commitment to social justice (the importance of working to correct social and economic inequalities) and community leadership. The advantage of this study was a comparison of persons that had graduated from high school and not attended college to determine whether the results were a consequence of the impact of college or maturity.

In sum the recent research on the impact of college on humanitarian student value change suggests that the structural and organizational characteristics' of institutions appeared to have an impact on value changes highlighted by the following conclusions.

1. Social involvement, peer relationships, and relationships with faculty and staff outside of class during college had a significant effect on the development of humanitarian values (Pascarella, Ethington and Smart, 1988; Rhee and Dey, 1996). Although, statistically significant due to the large sample size, these changes in values were small and therefore not as compelling as might be interpreted.
2. Church affiliated, or more politically oriented colleges were more effective in developing student civic values than other types of institutions that do not greatly influence student value change (McLaughlin and Smart, 1988; Rhee and Dey, 1996).

3. Postsecondary college attainment increased political and community leadership activity (Knox, Lindsey and Kolb, 1993).

The Schwartz Value Survey and College Student Values Literature

The Schwartz Value Survey (SVS) has been used to assess similarity and difference in value hierarchies between individuals and cultures around the world (Schwartz and Bardi, 2001). Education researchers have used the SVS instrument to study the values of graduate students in counseling psychology (Fagan, 1996); initial value priorities and moral sensitivity of Finnish college students (Myyry and Helkama, 2002); and value priorities of Iranian and American college students (Shokouhi-Benham and Chambliss, 1996).

Fagan (1996) used the SVS to test the hypothesis that graduate students in counseling psychology would endorse the goals of universalism and benevolence motivational types and there would be no significant differences between the personal values of graduate students and professional values of practicing counseling psychologists as described in the psychologist's code of conduct. The goals expressed by universalism and benevolence type values are motivations related to environmental and the, understanding, appreciation, tolerance and the welfare of all people (Schwartz, 1992). The impact of graduate school on self-direction and achievement motivational types were also analyzed. The self-direction and achievement type values are motivations related to the importance placed on personal success and independence of thought and action (Schwartz, 1992). The results of the cross-sectional national study ($N = 196$) supported the hypothesis that the professional values held by counseling

psychology graduate students are affected by their aggregate graduate school experiences. Students identified the four motivational types' universalism, benevolence, self-direction and achievement as the most important value priorities. A surprising outcome of the study was that the year in graduate school had an inverse effect on the professional values of counseling psychology students. Fagan (1996) suggests that a loss of idealism with the values of counseling psychology and conflict between personal values and the graduate program environment were responsible.

The SVS was used to examine the relationship between initial value priorities and moral sensitivity in a sample of 50 Finnish students majoring in social psychology enrolled in a course on professional ethics compared to 11 students in a qualitative research methods course (Myyry and Helkama, 2002). Pretest and posttest measures were administered at the beginning and at the end of the courses. The aim of the ethics course was to enhance student ability to identify and resolve ethical problems and to develop understanding of the professional role of the psychologist. Moral sensitivity was defined as an awareness of how our actions affect other people (Rest, 1994). Levels of student sensitivity were measured by a story in a social work context which included several moral issues (Aadland, 1993). The recognition of the moral issues were coded for answers according to the theoretical definition of moral sensitivity by Rest (1986), and using Bebeau, Rest and Yamoore's (1985) moral sensitivity test as a model for scoring. Students with higher value priorities in the motivational types' power, hedonism, and stimulation were lower on the sensitivity motivational value type. The power, hedonism and stimulation motivational type values are defined by the importance of social status, control over others, personal pleasure and an exciting life (Schwartz, 1992). The goals

expressed by the universalism type values are motivations related to environmental preservation, and the tolerance and the welfare for all people (Schwartz, 1992). Student scores in the universalism motivational value type were positively related to the sensitivity level of students. However, the results did not reveal the expected positive relationship between change in moral sensitivity scores and the universalism value types. Myyry and Helkema (2002) found that professional ethics training increased moral sensitivity in participants whose values were lower in the universalism motivational type but not in students who were high in the universalism motivational value type.

Iranian students ($N = 38$) and American students ($N = 45$) from a community college, large state school and private university located in the Washington DC area completed the SVS to examine acculturation of Iranian students to the United States (Shokouhi-Benham and Chambliss, 1996). Acculturation was defined as adoption of a new culture, including its values, through contact between members of the previous culture and the new culture. The acculturation scale (Hannassab, 1991) was used to separate less acculturated from more acculturated Iranian students. Significant group differences were revealed in the motivational value types power, benevolence, security, conformity and tradition. The power motivational type represents social status and control over others. The benevolence motivational type represents concern for the welfare of those people a person is in daily contact. The security motivational type represents safety and stability of society. The conformity motivational type represents willingness to delay gratification and deviance from social expectations. The tradition motivational type represents commitment to social and religious customs (Schwartz, 1992). Shokouhi-Benham and Chambliss (1996) attribute the response of the less

acculturated Iranian students to a residual collectivist commitment and the more acculturated Iranian students to an evolving Western individualism.

The Problem of Assessing Net Effects of College Attendance on Student Value Change

Astin (1970), over three decades ago, addressed the research problem of establishing causal inference of the impact of college on students in a three-component model of development. Student input, student output, and college environment comprised the three components of the model. Astin (1970) noted the student input variables that confound assessment are self-selection, recruitment, student background, abilities, and maturation over time. The student input variables confound the assessment of the amount of change in student development that are caused by particular educational experiences and/or college environment. Further, research evidence suggests that individual student characteristics were not randomly distributed to different types of colleges, or to different academic and social experiences within the same institution (Pascarella and Terenzini, 1991). This means that in estimating the influence of college on student development, one is confronted with the particular problem of separating the influence due to collegiate experiences itself from the influences due to the particular characteristics of the individuals who participate in the college experiences.

According to Pascarella and Terenzini (1991) student background characteristics were not merely the best predictors of many of the outcomes associated with college attendance, they were typically a major determinant of the type of college selected to attend and the extent and quality of involvement in different experiences during college.

Because individual student background characteristics influence both categories of variables (the collegiate experience and outcome measure), they satisfy the requirements for the classical definition of a confounding variable - that is, a variable so associated with both the independent (collegiate experience) and dependent (outcome) variables that it may be confused with the effect of the independent variable (Pascarella and Terenzini, 1991, p. 658).

Another way of saying this is that "associations between college experience and outcomes may be spurious or non causal because both are dependent upon mutually antecedent causes such as individual student background characteristics" (Pascarella and Terenzini, 1991, p. 658-659).

Another complex issue confronting the study of college effects on value change linked to student input variability was the problem of the "need to control for historical and/or generational influences" (Pascarella and Terenzini, 1991, p. 270). The complex issue of historical and/or generational influences presents a major research design problem and a problem of interpretation of evidence. It is important in the assessment of student value change to determine whether to attribute the change to the impact of college or as a consequence of larger social and historical events or individual maturity and experience. Period or history effects are "more difficult to identify" and refer to societal events that affect individuals approximately equally without regard to age (Pascarella and Terenzini, 1991, p. 291). The interpretation problem relates to identification: "Since age is a perfect function of cohort and period, since cohort is a perfect function of age and period, and since period is a perfect function of cohort and age, it is impossible to hold two of these variables constant and vary the third" (Glenn, 1980, p. 680).

Consistent with the evidence on student change reported in other than student value research, the differential influences associated with where one goes to school generally suggests that the structural characteristics of an institution are relatively independent of value change. Such institutional features such as size, type of control, mission, and curricular emphasis generally appear to be unrelated to value change in any consistent way. Where such influence was found, it was uniformly slight. "A plausible explanation for the general absence of between-institutional differences, as suggested ... would seem to be that the variability in students' academic and nonacademic programs and other experiences is greater within than across institutions" (Pascarella and Terenzini, 1991, p. 327). Traditional descriptors presumed to differentiate meaningfully among institutions such as type of control, size and mission may simply be too general to be useful predictors of student change. It is possible, however, that the combination of selectivity with small size and liberal arts emphasis may well be a more powerful set of predictors. Moreover, as Gurin (1971) has suggested, students are not immune to other sources of influence that lie outside the academic experience, including parental values and changes occurring in society at large. Expecting greater between-than-within-institution effects discovered in research may be unreasonable (Pascarella and Terenzini, 1991). The absence of 'major,' observable institutional differences may be partly attributed to the similarity of institutions of higher education. This finding indicates that the differences observed are attributable to initial and learning values of students (McLaughlin and Smart, 1987).

The issue of attributing value change in students to college makes evident the necessity to control for non college sources of influence including but not limited to

normal maturation, generational effects, and period effects in the study of the effects of college on students. Additional research complexities are noted by Pascarella and Terenzini (1991) in interpretation noting how the shift in the social, racial, political, sexual, and religious attitudes and values among students entering postsecondary education "poses a significant problem for interpreting" research literature on value change in students (p. 290).

The lack of statistical procedure to account for uncontrolled personal or group difference compromises the analyses of the net effect of college experiences especially in the domain of value change. As a result of these confounding influences "...knowledge of the magnitudes of college effects [on value change]...and of the processes by which change is initiated, remains disappointingly foggy" (Pascarella and Terenzini, 1991, p. 330) and significantly smaller than the research documenting change during the college years (Terenzini, 1993). Regardless, if a researcher is interested in the analysis of student value change some judicious categorization of outcomes is necessary. Some artificiality is unavoidable in any separation of the outcomes of college into discrete categories (Pascarella and Terenzini, 1991).

In response to the limits of recent research the list of variables that follow have been suggested as salient influences on the development of values or are commonly included in models and/or control variables proposed to assess college impact on students (Schwartz, 1994; Pascarella and Terenzini, 1991, Feldman and Newcomb, 1970; Rokeach, 1973; Tinto, 1975; Vreeland and Bidwell, 1966; Astin, 1977; Chickering, 1969; and Lacy, 1978).

1. Secondary school achievement. High school grade point average and test score.

2. Comparison of like scores to measure improvement (total and individual scores).
3. Identify students involved in campus leadership and community service activities.
4. Socioeconomic status.
5. Academic major.
6. The role of curriculum in matriculation (institutional selection).
7. Gender, Age, and Ethnicity.
8. College grade point average.
9. Rating of importance student placed on selection of university due to curricular design.
10. Rating of the amount and kind of student-faculty and peer contact outside of the classroom.
11. Specific curriculum or course design.

A final consideration related to the problem of assessment of the impact of college attendance on student value change is an overarching concern that jeopardizes the merits of recent research. Over the last two decades researchers on student value development have relied primarily on Cooperative Institutional Research Program (CIRP) data set and this data set has conceptual and measurement problems. Researchers recognize the methodological and conceptual weaknesses of data that may have been collected for purposes quite different from a researcher's secondary analysis purposes. Since the variables and scales are derived ex post facto the variables may provide less than optimal operational definitions (Pascarella, Ethington and Smart, 1988; Pascarella, Smart and Braxton, 1986). "Put simply, an instrument is valid if it measures what it is being used to measure and not something else" (Grandy, 1988, p. 142).

In addition, CIRP data is scaled using a four response Likert-type format. The four response format limits the degree of distinctions that can be made and potentially lowers internal-consistency reliability (Grandy, 1988). Moreover, broader distinctions may allow more subtle classifications of the input status of students and output differences. Notwithstanding the serious limits of secondary analyses and the limited Likert-type format, the recent research offers salient conclusions that guided the statistical analyses of the data gathered in this research project.

This research takes into consideration the critique of the literature relating to the impact of college on student value change in three important ways. First, was the use of the Schwartz value survey as an instrument of primary analysis that addresses the limits of the recent research using the CIRP data as a secondary source of analysis. Secondly, the student background information requested from the subjects included the variables noted as salient influences on the development of values or commonly included in models that proposed to assess college impact on students. Third, a pretest–posttest longitudinal design was used in the study. The same students completed the Schwartz Value Survey for a pretest–posttest between–subject comparison to measure individual student value change rather than drawing conclusions based on a cross sectional model.

CHAPTER 3

DESIGN AND METHODOLOGY

The purpose of this study of two undergraduate liberal arts core curricula was to answer the following questions: What was the impact on student humanitarian values of a traditional distribution core curriculum with a supplementary integrated intervention strategy that required students to examine personal values, the values of other individuals, groups and cultures compared to the impact on student humanitarian values of only a traditional distribution core curriculum? What background effects or other college experiences impact or predict student humanitarian value change?

Hypothesis: Student humanitarian values will be significantly higher for students who complete a traditional liberal arts distribution core curriculum with a supplementary intervention integrated strategy that encouraged students to examine individual values, the values of other individuals, groups and cultures than students who only complete a traditional liberal arts distribution core curriculum.

The impact of the curricula on college student humanitarian values were measured with the Schwartz value survey using a nonrandomized comparison-group

pretest-posttest design (Isaac, 1981). Student subjects were not assigned at random. The preassembled groups were formed by enrollment in required courses for freshman at FDU and OWU. Students at FDU were enrolled in a special core curricula described in detail later in this chapter. This sequence was initiated by the course Perspectives and the Individual. Students at OWU were enrolled in a traditional core distribution requirement but no special core curriculum , initiated by those students enrolled in, Freshman Writing Seminar.

	Pretest	Treatment	Posttest
Experimental group (FDU)	O ₁	X	O ₂
Comparison Group (OWU)	O ₁		O ₂

Table 3.1

Nonrandomized comparison-group pretest-posttest design.

The pretest was administered in January, 2001 and means scores were calculated using the SVS focusing on the universalism, benevolence and security value dimensions. The universalism, benevolence and security dimensions are the dependent variables. The independent variables were the core curricula at FDU and OWU. Over the next four semesters of undergraduate study FDU students, the experimental group, were exposed to a traditional core curriculum and a supplementary integrated four-course intervention (see Appendix A). The OWU students, the comparison group, were exposed only to a traditional core curriculum (see Appendix B). An integrated core curriculum is

... a program that introduces students not only to essential knowledge, but also to connections across disciplines, and, in the end, to the application of knowledge to life beyond the campus. The integrated core concerns itself with the universal experiences that are common to all people, with those shared activities without which human relationships are diminished and the quality of life reduced" (Boyer, 1987, p. 91).

A traditional core curriculum like the one in use at OWU is "... a body of knowledge that all people - no matter what their autonomy and particular interests - ought to acquire, if they are to be considered educated" (Kaplan from Hall & Kevles, 1982, p. 198).

The SVS posttest was administered in December, 2002 and student means scores were calculated for all value dimensions. Pretest-posttest mean score comparisons will be calculated for FDU students and OWU students separately. The mean pretest-posttest score differences will be compared to determine how the application of the treatment of the supplementary four-course intervention impacted student humanitarian values. A MANOVA and dependent paired samples t-test will be applied to determine whether the pretest-posttest differences are significant.

The advantages of the nonrandomized comparison-group pretest-posttest design are that internal validity is fairly satisfactory if the student sample groups have similar means and standard deviations on the pretest. Internal validity is strengthened using the nonrandomized comparison-group pretest-posttest design because the comparison group insures against mistaking effects of extraneous variables such as history, pretesting, maturation and instrumentation for the main effects of the supplementary four-course intervention.

Within session variations may cause problems with internal validity. The effects of mortality of the student sample are controlled in the longitudinal design format.

Variations in administration of the pretest, such as, personalities of the test administrator and room conditions may cause bias if not carefully checked (Isaac, 1981).

External validity concerns relate to the generalizability of the results to other students and college environments. In this research study the concerns relate to the impact of any extraneous variables that interact with the supplementary course intervention that may influence student values. Generalizability problems of interaction of class selection, pretesting, college selection, history effects and the knowledge that students knew they were participating in an experiment are all considered in the research design (Isaac, 1981).

A higher degree of external validity may be achieved using the nonrandomized comparison-group pretest-posttest design since this study includes a wide variety of classes presented from varying teaching perspectives. According to Isaac (1981) this is especially true for interaction of class selection and the course intervention. The interaction of pretesting and the course intervention treatment may compromise external validity. However, both student sample groups were aware that a posttest would follow. The FDU students and the OWU students knew only that they were involved in a study to examine the impact of college on student values. The students did not know that the research was comparative or that there was an experimental or comparison group to minimize the risks to generalizability. The interaction of institutional selection, core curriculum and course intervention treatment may compromise the generalizability across undergraduate populations. The possibility that students selected FDU or OWU to attend

because of the core curriculum was considered in the analysis. Interaction of a period effect or historical event may compromise external validity if the experimental treatment coincides with a dramatic event such as the 9.11 New York City terrorist attack.

Schwartz Value Survey Instrument

The Schwartz Value Survey (SVS) (see Appendix C) is the most widely used instrument for measuring personal values (Eliason and Schubot, 1995). Values are defined by Schwartz "as desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity" (1994, p. 21; cf., Kluckhohn, 1951; Rokeach, 1973). Schwartz (1994) describes values as serving interests of some social entity, motivating action, giving direction and having emotional intensity. Values are conscious goals or motivations that represent the three universal requirements of human existence: (1) biological needs of individuals, (2) individual needs for coordinated social interaction and (3) the survival and needs of groups (Rokeach, 1973; Schwartz, 1992). Schwartz's approach was based on the assumption that all people possess the same values to different degrees and values are organized into a system or learned organization of principles that guide decision making that satisfy the universal requirements of human existence (Rokeach, 1973; Schwartz, 1992). The following view expressed by Kluckhohn and Strodtbeck (1961) supports the assumption that values are universal and shared by all people.

... it is assumed that there is a limited number of common human problems for which all peoples at all times must find some solution. This is the universal aspect of value orientations because the common human problems to be treated

arise inevitably out of the human situation. ...while there is variability in solutions of all the problems, it is neither limitless nor random but is definitely variable within a range of possible solutions. ...the main key to the later analysis of variation in value orientations, is that all alternatives of all solutions are present in all societies at all times but are differentially preferred (p. 10).

In construction of the value survey Schwartz considered a variety of resources. Values from the Rokeach (1973) survey as well as instruments developed in other cultures were considered (Braithwaite & Law, 1985; Chinese Culture Connection, 1987; Hofstede, 1980, Levy & Guttman, 1974; Munro, 1985). Additional values were considered from a review of texts on comparative religions and discussions with international scholars (Schwartz, 1992). Ten motivationally distinct value types and fifty-seven single values representing the ten types emerged for use in the survey. The ten value types encompass the range of values recognized across cultures responding to the requirements with which all individuals and societies must cope in order to survive (Schwartz and Sagie, 2000). The types of motivational goals are used to understand how individuals and groups cope with reality in a social context.

Schwartz (1994) structured a value typology into ten types by grouping single values together by the motivational goal the value expresses (cf., Schwartz and Sagie, 2000). Schwartz's (1992) typological approach considers that values may be interdependent and can be more comprehensive than a list of single values that may overlook meaningful individual or group value preferences. The most important advantage of the typological approach is the consideration of the widely shared

assumption that attitudes and behavior are a mediation among competing values and not the consequence of a single value position (Rokeach, 1973; Schwartz, 1996; Schwartz, 1992). Table 3.2 lists the values types defined in terms of its central motivational goal. The definition of the motivational goal follows along with, in parentheses, the set of specific single values that represent each value type. The single value represents a motivational type when actions that express the value or lead to its attainment promote the central motivational goal of the type (Schwartz and Bardi, 2001).

The single values in the Schwartz Value Survey are presented in two lists. The first 30 values are phrased as terminal values followed by 27 values phrased as instrumental values. Adopting Rokeach's (1973) procedure each value has a short explanatory phrase to further specify the meaning of the value. Terminal values or terminal goals are defined as end states and are phrased as nouns. Instrumental values or instrumental goals are defined as modes of behavior and are phrased as adjectives. The terminal-instrumental distinction has been proposed by philosophers (e.g., Lovejoy, 1950; Rescher, 1969) and by psychologists (e.g., Braithwaite & Law, 1985; Feather, 1975; Rokeach, 1973), although some have doubted its validity (e.g., Dewey, 1957; Gorsuch, 1970; Jones, Sensenig and Ashmore, 1978). Schwartz (1994) continues to retain the terminal-instrumental distinction in the survey format but finds no evidence after using factor analyses of the combined lists to continue to maintain the separation.

Respondents rate each value on a 9 point importance scale "As a guiding principle in my life," from 7, of supreme importance, to 6, very important, unlabeled 5, 4, to 3, important, unlabeled 2, 1, to 0, not important, to -1, opposed to my values. Prior to rating the values on each list, respondents are asked to choose and rate their most and least

Universalism: Understanding, appreciation, tolerance and protection for the welfare of all people and for nature (protecting the environment, a world of beauty, unity with nature, broadminded, social justice, wisdom, equality, a world at peace, inner harmony).

Benevolence: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (helpful, honest, forgiving, loyal, responsible, true-friendship, a spiritual life, mature love, meaning in life).

Power: Social status and prestige, control or dominance over people and resources (social power, authority, wealth, preserving my public image, social recognition).

Achievement: Personal success through demonstrating competence according to social standards (successful, capable, ambitious, influential, intelligent, self-respect).

Self-direction: Independent thought and action – choosing, creating, exploring, (creativity, curious, freedom, choosing own goals, independent).

Stimulation: excitement, novelty, and challenge in life (daring, a varied life, an exciting life).

Hedonism: Pleasure or sensuous gratification for oneself (pleasure, enjoying life, self-indulgent).

Tradition: Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide (devout, respect for tradition humble moderate accepting portion in life, privacy).

Conformity: Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms (politeness, honoring parents and elders, obedient, self-discipline).

Security: Safety, harmony, and stability of society, of relationships and self (clean, national security, social order, family security, sense of belonging, reciprocation of favors, healthy). (Barnea and Schwartz, 1998; Schultz and Zelezny, 1999)

Table 3.2

Definitions of the Motivational Goals or Types of Values and the Single Values Used to Index Them in This Study

important values, thereby anchoring their use of the response scale. One of Rokeach's (1973) important contributions to value theory was his observation that value motivational goals exist for all persons but may shift in personal estimation of importance, or ascend and descend in importance.

Rating was used in preference to ranking both for methodological and conceptual reasons (Schwartz, 1994). Rating has more useful statistical properties. It allows researchers to use longer lists of values and to add alternative values without affecting the ratings of the core values. Rating does not force respondents to discriminate among equally important values or to compare directly values they may experience as incommensurable because one expresses personal, and the other social goals (e.g. health and social order: Kitwood & Smithers, 1975). Rating also enables respondents to measure negative values - those people wish not to express or promote in their choices and behavior. This is important in cross-cultural work because values viewed as desirable in one culture may be viewed as goals to be rejected in another culture. Rating, however, raises a problem of scale that is overcome with an anchoring procedure.

Conceptually, rating may be phenomenologically closer than ranking to the way in which values enter into situation of behavioral choice (Ball-Rokeach & Loges, 1994 disagree) (Schwartz, 1994 p. 26). Ranking requires respondents to express sharp, definitive preferences between every pair of values. However, people are typically aware only loosely of the possible contradictions between relevant values when making most behavioral choices. The process of weighing and combining value priorities, when applying values, is usually not so precise and self-conscious (Alwin & Krosnick, 1985). People may avoid the sharp juxtaposition of competing values through selectively

perceiving one value or another as more relevant to the issue at hand (Kristiansen and Zanna, 1994) or through other defensive perceptual processes that make it unnecessary to choose which value is more important as required in the Allport-Vernon-Lindzey Value Survey. Rating anchored by first reading through the whole list of values is probably closer to the "psychologic" of choice (Crosby, Bitner and Gill, 1990). It enables people to indicate the importance of each value separately, while keeping loosely in mind the importance of other values (Schwartz, 1994).

Schwartz (1994, 1992) gathered cross-cultural evidence from 97 samples in 44 countries from every inhabited continent to validate the survey instrument. The research sample totaling 25,863 respondents included school teachers and students in a variety of stages of education, and 12 occupationally heterogeneous samples of adults diverse in language, geographical region and culture. While the breadth of survey offers a strong test for possible universal aspects of values, it is limited to contemporary literate cultures. Schwartz (1992) proposes that while some of the values may be absent in a few remaining small, isolated, homogeneous cultures, the values in the survey are likely to be recognized to some degree in virtually all cultures.

A Guttman-Lingoes Smallest Space Analysis (1968), a multi-dimensional scaling technique was used to analyze the similarity and difference among values to validate the correspondence between the actual and the hypothesized content and structure of each of the motivational types (Burgess and Schwartz, 1994; Schwartz, 1994). The smallest space analysis uses the correlations between the importance rating of the 57 values representing the data as points in a geometrical space. The smallest space analysis provides a two-dimensional spatial representation or map of relations among values.

Each value is represented as a point to reflect empirical similarity. Empirical similarity is defined as the proximity of location between the values represented as points that establish conceptual similarity (Schwartz, 1992; Shye, 1985). The criteria that served to identify the various motivational types was the presence of at least 70 per cent of the values reflecting the basic value goals and the absence of 33 per cent of the other values postulated to belong to another of the 9 motivational types (Schwartz, 1992). The findings substantially support the conclusion that the sample subjects, in the large majority, "...discriminate all ten value types implicitly when they evaluate the importance of their values. ...[and] that no major motivational aspect of values is missing from the theory" (Schwartz, 1994, p. 32; Schwartz and Sagiv, 1995). All ten value types were found in 67.5% of the samples and in 92.5% were found at least eight or more of the value types (Schwartz, 1992). The values that were identified with one motivational type in at least 70% of the samples were selected to be included in the final survey (Schwartz, 1994).

In a sample of 224 Israeli Jewish adults, ages 18 to 73 years, the SVS was administered on two occasions, six weeks apart, to investigate the reliability of the survey (Schmitt, Schwartz, Steyer, & Schmitt, 1993). The test-retest reliability and internal consistency reliability coefficients for the ten value types in the SVS ranged from .70 to .90 and exceeded .80 for most scales. Further, the analysis revealed that the largest proportion of variance of the value measures was attributable to individual differences in value priorities.

Sagiv and Schwartz (1995) assessed the content and structure of value types in follow up research and compared the results with those postulated in the theory in past

research. The conclusions from 542 Japanese students and 387 Australian students completing the SVS strengthened earlier research. The findings support the validity of the SVS that ten motivationally distinct value types are recognized across cultures. In 82% of the samples all ten value types met the criterion that the values from a type that was not distinct were typically intermixed with those of a type postulated to be adjacent to it according to theory. In the findings forty-four specific values were found to have highly consistent meanings across cultures. The forty-four values were located using smallest space analysis in 85% of samples in its postulated primary motivational type or in a type that is similar in motivational concern.

Schwartz and Burgess (1994) examined the validity of the theory of the universal structure and content of values in two studies of diverse groups in South Africa not previously tested using multiple value measurement instruments. In the first study 1364 subjects from the four major racial groups in South Africa completed the Rokeach value survey. The second study sponsored by Midrand, South Africa town council used the Schwartz Value Survey and was designed to analyze the consumption patterns, media use and leisure preferences of skilled labor, administrative and management staff. The results compared favorably to the conclusion that the meaning of an individual value was reflected in the pattern of its' intercorrelation using smallest space analysis with other values as found in research conducted by Schwartz and Sagiv (1995) using international samples.

Menezes and Campos (1997) conducted a cross-sectional study that evaluated the process of value-meaning construction using the SVS with a sample of 600 Portuguese adolescents, young adults, and adults. The two-dimensional smallest space solution

proved adequate for testing structural, content and meaning hypotheses. Results revealed the validity of the hypothesized motivational types on the three sample groups within a Portuguese context and also within various age groups similar to the outcomes of Schwartz's (1992) earlier research.

Results in a study conducted by Spini and Doise (1998) that examined the social anchoring and organizing principles of involvement in human rights activities and the correlations between the organizing principles and value types were consistent with Schwartz's (1992) model predicting the internal structure of values. The data was analyzed by comparing the obtained internal structure of values with Schwartz's (1992) value structure. The result using smallest space analysis yielded a structure that proved to be fairly reliable for predicting the internal structure of values described by Schwartz (1992). Forty-six of the fifty-seven single values were located in the predicted ten value type locations. The range of the Cronbach coefficient alpha's was .41 to .78 within the ten value types.

More recently Schwartz et al (2001) conducted research to address the validity and cross-cultural reach of the theory by examining whether the Portrait Value Questionnaire (Oishi, Schimmack, Diener, and Suh, 1998) yielded results similar to the SVS to validate that Schwartz's values theory was not instrument dependent. The study sample included 200 Israeli university students enrolled in a variety of majors. The mean age was 24.2 years and 53 per cent of the sample was female. A multitrait-multimethod with the single-trait method techniques were employed to assess the convergent and discriminant validity of the value constructs. The range of the Cronbach coefficient alpha's was .45 to .79 (median .66) within the ten value types. The acceptable Cronbach

reliability coefficient is .70 (Nunnally, 1978) but lower thresholds are sometimes used in the literature. The results reinforced the construct validity of the content and structure of the values theory.

The groups of values in the Schwartz typology that were of particular interest to this research were the universalism, benevolence and security type values. The universalism, benevolence and security type values reflect the value contents of the definition of humanitarian values used in this research context. The goals expressed by the universalism, benevolence and security type values are motivations derived from the universal requirements of existence that support individual and group requirements for interaction and survival. The goals expressed by the universalism, benevolence and security type values are motivations related to social stability, environmental preservation, and the understanding, appreciation, tolerance and the welfare for all people (Schwartz, 1992). Fundamental principles of survival expressed by universalism, benevolence and security type values are that people's failure to accept others who are different and treat them justly will lead to social instability. A breakdown of interpersonal relationships and failure to protect the natural environment will lead to the destruction of the resources on which life depends. The individual and group development of the value contents of the motivational goals of universalism, benevolence and security are according to Locke (1989) and Verharen (1993) necessary in order to solve our culture crisis.

Rationale for Institutional Selection

The rationale for selecting the two institutions participating in the study, Farleigh-Dickinson University (FDU) and Ohio Wesleyan University (OWU), was the common vision revealed in the institutional mission statements. FDU and OWU are committed to the broadly accepted social responsibility of higher education in America to educate for values (Dewey, 1909; Ikenberry, 1997; Jacob, 1957; Morrill, 1980; Rokeach, 1973; Rosovsky, 1990; Rudolph, 1970). Similar to more than ninety percent of the institutions of higher education in America, FDU and OWU require the fulfillment of a general education core distribution sequence that includes exposure to the social sciences, natural sciences, humanities, writing and a foreign language (Hurtado, Astin and Dey, 1991). Moreover, FDU requires an additional core intervention sequence that exposes students to some of the basic issues that confront people as members of a world community.

The curricular intervention strategy requirement at FDU is the distinction that sets apart the two private liberal arts universities participating in the research study. The required FDU four-course core curricular intervention strategy is designed to address what faculty and administrators have identified as central for students living and working in the 21st century.

Beyond a common mission, highlights of institutional similarities and differences between FDU and OWU are average age of student population, general education distribution requirements, student demographic, class size, academic calendar, residential character and multicultural enrollments. Marked institutional differences include academic profile (although, over 70% of the research sample at FDU and OWU scored greater than or equal to 1000 on SAT), FDU is a non denominational institution and

OWU is loosely affiliated with the Methodist church, persistence and retention rates (although the sample cohort had similar retention statistics FDU = 66%, OWU = 68%), geographic location are different. The OWU student population has greater geographic diversity and FDU has a greater percentage of students graduating in the field of business and marketing. Following is a brief description of Farleigh-Dickinson University and Ohio Wesleyan University and a summary of the FDU and OWU student demographic data. The data source for the student demographic information was the Common Data Set 2000-2001 (see Appendix D). The common character of the FDU and OWU organizational structure and student demographic is reflective of the intentional effort to locate college environments and students that are more similar than dissimilar for this research.

Farleigh Dickinson University and Student Demographic Profile

Farleigh-Dickinson University, founded in 1942 as a junior college, is a private, nonsectarian, coeducational, regionally accredited institution offering academic programs at the undergraduate, graduate and professional levels. The University maintains campuses at Teaneck-Hackensack and Florham-Madison both located in northern New Jersey as well as campuses in England and Israel. Students enrolled at the Florham-Madison campus are the subjects of this research study.

The Florham-Madison campus located thirty-five miles west of New York City is a primarily residential college campus that offers a broad range of undergraduate programs in the arts, sciences and business administration that provides "... an academically challenging learning environment with an enhanced residential experience"

(FDU, 1998, p. 6). The five academic programs that have the highest percentage of degrees conferred between the July 1, 1999 and June 30, 2000 at Farleigh-Dickinson University are: Business/marketing 32.8%, Psychology, 13.9%, Social sciences and history, 13.7%, Visual and performing arts, 8.3%, and Biological and life sciences, 7.7%. The Farleigh-Dickinson University 2000 fall semester student-faculty ratio is 16:1. FDU has 107 full time faculty and 154 part-time faculty. Among the 107 full time faculty 77 or 72 percent of the faculty hold a Ph.D. or highest attainable degree in their field.

FDU in 2000 enrolled 2526 full and part-time students. Enrolled first-time, first year degree freshman included 245 men and 263 women at an average age of 18 from which approximately 15 percent matriculate from out of the state of New Jersey, excluding international students/non-resident aliens. The percentage of first-time, first year degree seeking students that submitted SAT scores that were above 600 verbal equals 15.4 percent and above 600 math equals 13.1 percent with 7.5 percent ranking in the top tenth of the high school graduating class. The FDU multicultural enrollment total of 17 percent of the undergraduate population, 222 students unknown race ethnicity, approximates the 18 percent of the entering 2000 first-time, first year degree seeking freshman class.

The projected annual tuition, fees, room and board expenses at Farleigh-Dickinson University for the 2000-2001 academic year is \$24,549. The average FDU financial aid award package, excluding any resources that were awarded to replace estimated family contribution such as unsubsidized loans is approximately \$15,500. The average family contribution balance per student equals \$9,049 for the 2000-2001 academic year.

At FDU the persistence and retention rate for the initial 1994 cohort demonstrates that 66 students of the initial cohort of 250 completed a degree in four or less by the date August 31, 1998. The Farleigh-Dickinson University six-year graduation rate of the initial 1994 cohort is 47.6 percent. In the fall 2000 semester at the date FDU calculates official enrollment 76 percent of the 1999 cohort of all full-time bachelor's degree seeking undergraduate students were enrolled who entered as freshman in the fall of 1999.

Ohio Wesleyan University and Student Demographic Profile

Members of the Methodist church founded Ohio Wesleyan University in Delaware, Ohio in 1842. Ohio Wesleyan still maintains a remote but ideological affiliation with the Methodist church. A limit of the OWU-Methodist relationship was described in the college catalogue where it was written that OWU is an "independent, undergraduate liberal arts institution" (OWU, 1998, p. 4).

The Delaware campus located 25 miles north of the capital city of Columbus, Ohio is a private, regionally accredited, coeducational primarily residential institution. Ohio Wesleyan University is grounded in the liberal arts and offers pre-professional programs in engineering, medical technology, optometry and physical therapy. The five academic programs that have the highest percentage of degrees conferred between the July 1, 1999 and June 30, 2000 at Ohio Wesleyan University are: Social sciences and history, 21.4%, Business/marketing 16.3%, Biological and life sciences, 13.4%, Education, 12.1%, and Psychology, 7.6%. The Ohio Wesleyan University 2000 fall semester student-faculty ratio is 13:1. OWU has 125 full-time faculty and 51 part-time

faculty. Among the 125 full-time faculty 124 or 99 percent hold a Ph.D. or highest attainable degree in their field.

The projected annual tuition, fees, room and board expenses at Ohio Wesleyan University for the 2000-2001 school year is \$28,490. The average OWU financial aid award package, excluding any resources that were awarded to replace estimated family contribution, such as unsubsidized loans, is approximately \$22,124. The average family contribution balance per student equals \$6,366 for the 2000-2001 academic year.

OWU in 2000 enrolled 1880 full and part-time students. Enrolled first-time, first year degree freshman included 271 men and 280 women at an average age of 18 from which approximately 38 percent matriculated from out of the state of Ohio, 18 percent from the eastern seaboard, excluding international students/ non-resident aliens. The percentage of first-time, first year degree seeking students that submitted SAT scores that were above 600 verbal equals 55.1 percent and above 600 math equals 53.9 percent with 29.1 percent ranking in the top tenth of the high school graduating class. The multicultural enrollment total of 20 percent of the undergraduate population approximates the 22 percent of the entering 2000 first-time, first year degree freshman class.

At OWU the persistence and retention rate for the initial 1994 cohort demonstrates that 300 students of the initial cohort of 480 completed a degree in four or less by the date August 31, 1998. The Ohio Wesleyan University six-year graduation rate of the initial 1994 cohort is 69.7 percent. In the fall 2000 semester at the date OWU calculated official enrollment 80.9 percent of the 1999 cohort of all full-time bachelor's degree seeking undergraduate students were enrolled who entered as freshman in the fall of 1999.

The Farleigh-Dickinson University Core Curriculum

Central to the mission at Farleigh-Dickinson University is the commitment to provide a global perspective for all its students in response to the complexities and momentous challenges of the contemporary world. Confronting this responsibility FDU has designed such a learning experience in the creation of the interdisciplinary University core curriculum. The core curriculum is the "cornerstone" of the FDU undergraduate academic experience. FDU students are required to complete the college core curriculum that includes a freshman seminar course, basic skills courses, humanities and social-behavioral sciences, laboratory sciences, and the interdisciplinary university core. The college core distribution requirements occupy from 40% to 47% of the course experience for FDU students working toward a Bachelor of Arts or Bachelor of Science degree.

The core curriculum experience begins with the freshman seminar course. All incoming students are required to enroll in freshman seminar. The purpose of the freshman seminar is to help freshman make the transition to college life and studies.

The basic skills requirement is fulfilled by completing two English composition courses, two mathematics courses, two foreign language courses and one physical education course. Students have two options to complete the humanities and social-behavioral sciences requirement. Students may elect to enroll in introductory courses in three different disciplines or two introductory courses in two different disciplines and one intermediate course or advanced course in the same discipline. Courses in the humanities are from the departments of history, philosophy, art, theatre and music. Courses in the social-behavioral sciences are from the departments of anthropology, economics, political science, psychology and sociology. Introductory courses in a student's major from the

humanities or social-behavioral sciences are applied to the major and not the core to ensure academic breadth.

Science majors fulfill the laboratory science requirements by completing two science courses in a discipline other than the students' academic major. Students majoring in a discipline in the humanities or social-behavioral sciences are required to complete three laboratory science courses originating from at least two different disciplines. Courses from disciplines that fulfill the laboratory science requirement are biology, chemistry, geology and physics.

The university core interdisciplinary studies requirement supplements the broad exposure to the variety of disciplines in the traditional liberal arts core curriculum. The purpose of the university core sequence is to have students "begin to examine [their] own values while becoming aware of the differing values of other individuals, groups, and cultures" (Farleigh-Dickinson University, 1999). Required of all students at FDU, this interdisciplinary, four-course sequence exposes students "to some of the most basic issues that confront us as responsible members of the human community" (FDU, 1999). The four-course sequence is organized around themes that are designed to help students grasp and negotiate the transforming interrelationships affected by living in a global community and the common needs and experiences of all people within and among cultures:

These courses, which are meant to create a progressive awakening to the contexts in which we live, begin with perspectives on the individual. They move on to a study of the individual's place in American society, then examine the world from

a cross-cultural perspective, and conclude with an investigation of global issues (FDU, 1999).

The FDU core sequence begins with Core 1001- Perspectives on the Individual, immersing the student in reflections on the most basic of all Western cultural traditions. The focus is on the primary value of the individual, individual growth and an exploration of the constraints that society imposes on the individual. The second course, Core 1002 - The American Experience: The Quest for Freedom, broadens the focus beyond the self to explore the role of the individual as a member in American society. The course concentrates on Western traditions and the strengths and weaknesses of American cultural heritage. The third course, Core 1003 - Cross-Cultural Perspectives, challenges students to view the world through a different lens and consider cultural systems and values different from their own such as China, India, and Nigeria. The final course in the sequence, Core 1004 - Global Issues focuses on global interdependence in the context of personal security and modern technology and the fact that no country or group is self-sufficient (FDU, 1999).

The progression begins with an inquiry into individual understanding of cultural uniqueness and development, followed by Western and non-Western cross-cultural exposure and global analysis. The instructive design was built upon connecting subject matter through "sequential learning, building on blocks of knowledge that lead to more sophisticated understanding and encourage leaps of imagination and synthesis" (Association of American Colleges, 1991, p. 4).

The FDU strategy possesses three important characteristics that distinguish it as a model for other institutions attempting to internationalize and strengthen the

undergraduate curricula. First, the comprehensive approach employed at FDU avoids the pitfalls of superficial institutional treatment. "Commonly, schools are requiring one or more courses in a world or non-Western civilization... however, it is unlikely that they accomplish one of our most widely professed learning goals: preparing students for an increasingly interdependent world" (Nussbaum from Johnston, 1999). FDU faculty made the decision to be responsive to the learning goal to prepare students to live in an interdependent world by designing a curriculum that was global in conceptual framework. The goal of such a framework is to stimulate integrative thought across disciplines and an appreciation for the multiple global influences in every day life.

Second, the FDU general education core was required of all undergraduate students regardless of their majors or intended careers. In requiring the core sequence for all undergraduate students FDU confirmed that the study of world systems and global issues advance the central mission of liberal education and has cross disciplinary application.

Finally, the FDU curricular design model was distinctive because it interfaces the objectives, context, content, climate, and the affective qualities of internationalization (Toombs and Tierney, 1991). Coherence and connected learning for the undergraduate was achieved as a consequence of biweekly faculty meetings to coordinate presentations and assignments in sections of the core courses. At FDU all faculty members teaching core courses operate from a common topical syllabus, common readings, examinations and assignments. According to Johnston (1999), AAC&U Vice President for Education and Global Initiatives, any university that calls upon its faculty to make common cause in

the development of general education courses attending to global systems of interdependence is moving in a direction of scholarly innovation.

The FDU core curricular strategy provides a model comprehensive approach that broadens the traditional ideology of cultural heritage incorporating the plurality of cultures with the United States and the world that fosters a global perspective for all undergraduate students. The FDU faculty is taking advantage of the reformed curriculum to alter the classroom pedagogy toward a new ethos and collaborative style. The collaborative style is exercised outside the classroom through faculty use of common syllabi and content. Inside the classroom the collaborative style bridges the traditional teacher-student dynamic using an approach that values the individual student perspective and student-faculty interaction. Exploration of multicultural perspectives and social, economic, and political diversity in the Western and non-Western frame was encouraged broadening thought that stimulates community-global thinking.

...helping people to appreciate what is valuable in other people's cultures and understanding of human values is important to learning the worth and strength of diversity. Much of history reflects a sense of power as hierarchy, which distorts and minimizes a sense of shared power that is more inclusive and diverse, resulting in more valuable and greater strength (Curry, 1999, p. 270).

FDU as a community of learners is committed to an educational environment that fosters growth and development, social justice, understanding among people and enrichment for all who study and work at FDU (Farleigh-Dickinson University, 1998). The FDU mission statement confirms an institutional commitment to prepare students to

respond to the ever changing global environment by designing a core learning experience that addresses the demands of world citizenship.

The Ohio Wesleyan University Core Curriculum

Ohio Wesleyan University is a selective mid-western liberal arts institution that provides opportunities for students to acquire not only depth in a major area but also knowledge about their cultural past through the insight provided by a broad curriculum. The OWU catalogue under "Statement of Aims" reads: "The transmission, extension, and discovery of knowledge are central to the liberal arts tradition" (Ohio Wesleyan University, 2000, p. 6). Toward achievement of this goal, all candidates for graduation must meet several distribution requirements that OWU considers essential in the liberal arts transmitted through the humanities, arts, and sciences.

At Ohio Wesleyan, education is placed in a context of values, and students are encouraged to develop the intellectual skills of effective communication, independent and logical thought, and creative problem solving. "Liberal education seeks to develop in students understanding of themselves, appreciation of others, and a willingness to meet the responsibilities of citizenship in a free society. It recognizes that trained sensitivity to private and public value issues, grounded in a sound grasp of various cultural heritages, is important for maturation for living a good life" (Ohio Wesleyan University, 2000, p. 6).

To satisfy the distribution requirements in the Bachelor of Arts program at OWU, students must complete up to ten courses selected from four groups of disciplines. The four groups of disciplines are the social sciences, natural sciences, humanities literature,

and arts. In addition students must fulfill an English composition, foreign language and cultural diversity requirement that is defined as a course on a Non-Euro-American topic.

Students were required to take three courses, two from one academic department to fulfill the social science requirement. Courses in the social sciences are from the departments of economics, geography, history, journalism, politics and government, psychology, sociology and anthropology, and some specific departmental offerings in the field of black world studies and urban studies.

Within the natural sciences, the second distribution area, students are expected to complete three courses. Students may complete three courses in one academic department or two courses in one academic department and a third course in a second academic department. The course options are in the academic departments of astronomy, botany, microbiology, chemistry, geology, physics and zoology.

In the disciplines of humanities and literature, students are required to complete three courses with no more than two in one academic department. Courses that fulfill this group requirement are in English literature, humanities, literature in a foreign language, religion, philosophy, and specified course offerings in theater and black world studies. Students must take one course to fulfill the arts distribution requirement. Classes sufficient to fulfill the art requirement include specific courses in English, fine arts, music, theater and dance. The goal of requiring students to enroll in courses from a variety of disciplines is to assure breadth and balance in the academic experience and at OWU that:

... means the whole development of an individual, apart from his occupational training. It includes the civilizing of his life purposes, the refining of his

emotional reactions, and the maturing of his understanding about the nature of things according to the best knowledge of our time (Nostrand, from Rosovsky, 1990, p. 100).

There is no written rationale or description of purpose of the core distribution requirements in the OWU literature. However, it is clear that exposure to a broad set of disciplines is important at OWU. Distribution requirements occupy nearly one-third of the course experience for students working toward a Bachelor of Arts degree. Further, only two courses in a student's major may apply toward fulfillment of their distribution requirements. The institutional statement of aims highlights the importance of a variety of experiences important to be considered a liberally educated human being. Liberal education is the way OWU describes a college education. "To the extent that Ohio Wesleyan educates liberally, it fulfills its ultimate purpose of equipping students with knowledge, competence, and character for leadership, service, and continued learning in a complex and increasingly global society" (Ohio Wesleyan University, 2000, p. 6). Rosovsky describes this type of curriculum as a "perfectly reasonable end in itself" (1990, p. 100).

Data Collection

In an attempt to isolate the impact of the core curricula at FDU and OWU on humanitarian student value change the SVS pretest was administered during the first week of the second semester of enrollment during the freshman year at FDU and OWU. At FDU the four core course intervention sequence began during the second semester of the freshman year for all students. The pretest sample at OWU was drawn from the only

course required for all students at OWU, an introductory freshman writing course. Due to faculty size, approximately 40% of the freshman students are arbitrarily enrolled by the registrar in the writing course during the second semester while 60% of the freshman class are enrolled in the course during the first semester of enrollment. The SVS posttest was administered to students at both institutions during the final two weeks of the fifth semester of enrollment marked by the conclusion of the final course in the core intervention at FDU. Typical at both institutions was the tradition of fulfilling the core distribution requirements during the early semesters of enrollment prior to completion of the academic requirements in the major field of study.

At Farleigh-Dickinson University, the SVS was distributed in class and immediately collected from students during the week of January 29, 2001, the first week of class of the second semester. The survey was distributed to twelve class sections of Core 1001, Perspectives on the Individual. Core 1001 is the first core course, of the required four-course sequence, that is required for all first year students. The course is offered in the second semester of the freshman year. The response was ($N = 279$).

At Ohio Wesleyan University, the value survey was distributed during the week of January 15, 2001, the first week of class of the second semester. At OWU, the survey was distributed to nine class sections of English 105. English 105 was a required course for first year students and was offered in the first and second semesters of the freshman year. The survey was completed in class by at least one section. In other sections the students completed the survey out of class and returned to the instructor or returned directly to the investigator. The response was ($N = 102$).

The pretest sample population was reduced due to unacceptable respondent survey data. Respondents were excluded prior to the analyses if they selected response 7, value of supreme importance more than 21 times, or selected any other response more than 35 times. The respondents who answered narrowly at these levels were assumed to have failed to make a serious effort to differentiate among personal values. The data collection guidelines for exclusion from the analyses are consistent with the research practices used by Schwartz in his cross cultural studies. In addition, the persons that responded to fewer than 41 values were excluded for the analyses. Names on the surveys that were not intelligible were also withdrawn from the analyses. The total number of respondents excluded from the samples on these bases are ($N = 24$) from FDU and ($N = 8$) from OWU. The final pretest sample population from FDU was ($N = 255$) and from OWU ($N = 94$).

The SVS posttest was distributed in the classroom to FDU students enrolled in the last two weeks of the concluding core course in the intervention sequence, core 3004 Global Issues. At FDU the SVS was completed between the dates of December 3 and December 12, 2002. FDU students are not required to complete the four-course core intervention sequence in consecutive semesters. It was reported that course conflicts with other distribution requirements often prevent students from completing the core intervention in four consecutive semesters. Original class rosters for all seven sections of core 3004 offered in the fall 2002 semester were provided. There were 80 names that matched the FDU student pretest sample group ($N = 255$). The final FDU posttest sample group was ($N = 59$). The sample group from pretest to posttest was reduced due to absenteeism ($N = 8$), student course withdrawals ($N = 7$) and unacceptable respondent

survey data ($N = 6$). The 2000 fall semester FDU freshman cohort was 508. After the twenty-three month period between pretest and posttest 336 students were still enrolled at FDU or 66% of the original cohort. The final FDU student sample represented 18% of the students still enrolled from the 2000 cohort.

The SVS posttest was distributed personally or via campus mail to OWU students during the final two weeks of class of the fall 2002 semester. At OWU the SVS was completed between the dates of December 1 and December 17, 2002. From the student campus phone directory 60 names matched the OWU student pretest sample group ($N = 94$). The sample group from pretest to posttest was reduced due to attrition or study abroad experiences ($N = 34$), surveys not returned ($N = 4$) and unacceptable respondent survey data ($N = 1$). A student from OWU was dropped from the sample group because the student was not enrolled in the fifth semester at OWU ($N = 1$). The final OWU posttest sample group was ($N = 54$). The 2000 fall semester OWU freshman cohort was 551. After the twenty-three month period between pretest and posttest 373 students were still enrolled at OWU or 68% of the original cohort. The final OWU student sample represented 14% of the students still enrolled from the 2000 cohort.

Data Analysis

A MANOVA was used to examine the differences between the students at FDU and OWU on the SVS ten motivational types. The primary benefit of this approach allows the examination of the relationships between the curricular strategies between FDU and OWU. Secondly, using multiple measures of the SVS motivational value type scores, the dependent variables, as they represent the impact of the independent variable,

the core curriculum, on student humanitarian value change over time in the pretest and posttest scores of the FDU and OWU students. The advantage of using the MANOVA was to avoid the fatal flaws of running a univariate analysis of variance for each of the dependent variables. The flaws are an inflation of Type I and Type II error rates and may have led to inaccuracy in interpretation (Haase and Ellis, 1987).

Descriptive statistics were used to summarize the data. Mean differences between pretest and posttest scores are reported as well as the standard deviations to provide information about the representative scores and data variation. A dependent paired samples t-test was used to determine the impact, or mean differences, of the FDU and OWU core curricula on student humanitarian values for each student to answer the following questions. What was the impact of a traditional distribution core curriculum with a supplementary integrated intervention strategy that required students to examine personal values, the values of other individuals, groups and cultures on student humanitarian values? What was the impact of a traditional distribution core curriculum on student humanitarian values? The results of the student humanitarian value changes at FDU and OWU provided information to determine the impact of a purposefully designed integrated core intervention strategy in comparison to the traditional distribution core curriculum. The advantage for using the dependent paired samples t-test was to control extraneous variability. The scores were repeated measures, two scores taken on the same subject, and removes the variability due to the extraneous variables that cause the relationship (Toothaker and Miller, 1996). Variability due to background characteristics were accounted that exposed individual impact on the Schwartz Value Survey.

The longitudinal research design was a two group design with two groups of scores, and the scores were repeated on the same subject for a pretest – posttest analysis. The purpose was to analyze the student differences between the paired results under the two different core curricula at FDU and OWU. The first and second measures were correlated for significance to account for the connection between the student’s first and second measurement. A comparison was made of the difference between two dependent means to determine the mean difference between pretest and posttest. Robustness for sample size was met with a minimum of 15 observations per group. The distribution of the test should closely approximate a normal distribution and the test will be accurate since the sample size was moderate or large, 40 to 100 or more (Toothaker and Miller, 1996).

Multiple regression analysis was performed to learn about the relationship between student background characteristics and college experiences on student humanitarian value change. The experiences that were of particular interest in recognition of results of previous research, included student involvement in campus leadership and community service activities, peer interaction, and student – faculty interaction (Pascarella, Ethington and Smart, 1988; Rhee and Dey, 1996). Other variables considered were gender, ethnicity, school, academic major, socioeconomic status, size of home town, parents education and the role of the core curriculum in college selection. Multiple regression was performed using mean posttest scores of the universalism, benevolence and security motivational types as the dependent variables and background items as independent variables to determine whether there was a relationship between the experiences of the FDU and OWU college students and value change.

CHAPTER 4

Results

MANOVA analyses in Table 4.1 shows the main effects of the two schools on student value change measures for the SVS ten motivational types. The MANOVA revealed the multivariate significance ($p < .05$) for two sources (a) main effects between schools (FDU and OWU), $F(10, 102) = 2.43$, $p < .05$ and (b) interactive effects between pretest and posttest times and schools (FDU and OWU), $F(10, 102) = 2.12$, $p < .05$. An univariate model was conducted to reveal the motivational value types responsible for the variation. The between subject univariate analysis revealed significance ($p < .05$) for five motivational types (a) security $F(1, 111) = 4.47$, $p < .05$; (b) hedonism $F(1, 111) = 12.82$, $p < .05$; (c) power $F(1, 111) = 5.78$, $p < .05$; (d) achievement $F(1, 111) = 5.68$, $p < .05$ and (e) self-direction $F(1, 111) = 6.26$, $p < .05$. The within subject univariate analysis revealed significance ($p < .05$) for two motivational types between pretest and posttest times (a) benevolence $F(1, 111) = 6.90$, $p < .05$ and (b) security $F(1, 111) = 4.60$, $p < .05$. The within subject univariate analysis from interactive effects between pretest and posttest times and schools (FDU and OWU) revealed significance ($p < .05$) for three motivational types were significant (a) security $F(1, 111) = 5.28$, $p < .05$; (b) power $F(1, 111) = 7.77$, $p < .05$ and (c) achievement $F(1, 111) = 6.71$, $p < .05$.

Source	<u>Multivariate</u>			<u>Univariate</u>								
	<u>df</u>	<u>F</u>	Universalism	Benevolence	Security	Hedonism	Power	Achievement	Self-direction	Stimulation	Tradition	Conformity
Between subjects												
School (S)	1	2.43*	1.63	.03	4.47*	12.82*	5.78*	5.68*	6.26*	2.56	2.26	.39
<u>MSE</u>			120.21	79.49	50.60	18.29	84.65	25.60	22.56	20.97	56.28	23.09
Within subjects												
Test (T)	1	1.91	3.66	6.90*	4.60*	.24	.12	1.12	.24	3.49	1.83	.00
T x S	1	2.12*	2.02	1.08	5.28*	1.34	7.77*	6.71*	1.90	.02	.22	.03
<u>MSE</u>			35.01	23.26	21.02	5.19	17.81	15.26	10.72	7.96	23.88	10.34

Note. Multivariate F ratios were generated from Hotelling's statistic. Multivariate df = 10, 102. Univariate df = 1, 111.

*p < .05.

Table 4.1

Multivariate and Univariate ANOVA for the Schwartz Value Survey Ten Motivational Types Pretest and Posttest Results by School

As hypothesized significant mean sum differences were evident in the within subject multivariate interactive effect between tests and FDU and OWU students. However, revealed in the univariate model the hypothesized motivational types universalism and benevolence types could not be statistically ($p < .05$) documented therefore, the null hypothesis could not be rejected. The security motivational type did demonstrate significance $F(1, 111) = 5.28, p < .05$). The benevolence motivational type showed significant change for students regardless of school $F(1, 111) = 6.90, p < .05$) as did the security motivational type $F(1, 111) = 4.27, p < .05$). It is worthwhile noting that the universalism motivational type showed near significant change interactive effect between tests and FDU and OWU students $F(1, 111) = 2.02, p = .158$) and for students regardless of school $F(1, 111) = 3.70, p = .058$).

Figures 4.1 through 4.10 display the changes in the group means in the ten motivational value types from the pretest at the beginning of the second semester to the posttest at end of the fifth semester of enrollment at Farleigh Dickinson University ($N = 59$) and Ohio Wesleyan University ($N = 54$). The change trajectory in the Figures highlights the amount and direction of change of the two groups of students in the pretest-posttest comparison. The number of single values representing each of the ten motivational value types were: universalism (9), benevolence (9), security (7), power (5), achievement (6), self-direction (5), stimulation (3), hedonism (3), tradition (6) and conformity (4).

The Figures reveal lack of consistency in pattern for FDU and OWU students in pretest value importance scores, direction of change and posttest value importance scores. The FDU students pretest mean scores are higher than the OWU students pretest scores in

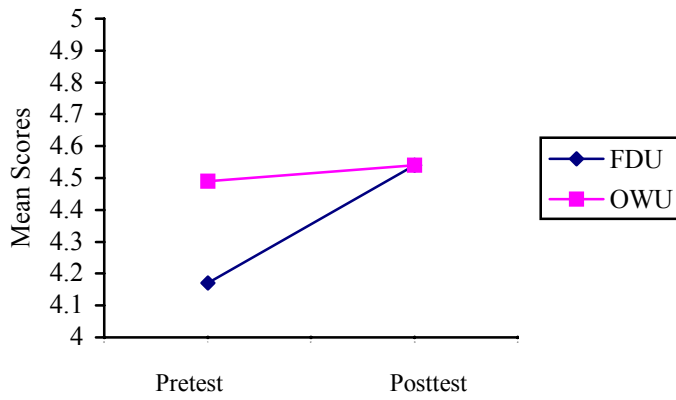


Figure 4.1 Pretest and Posttest Mean Scores for Universalism Value Type Scores

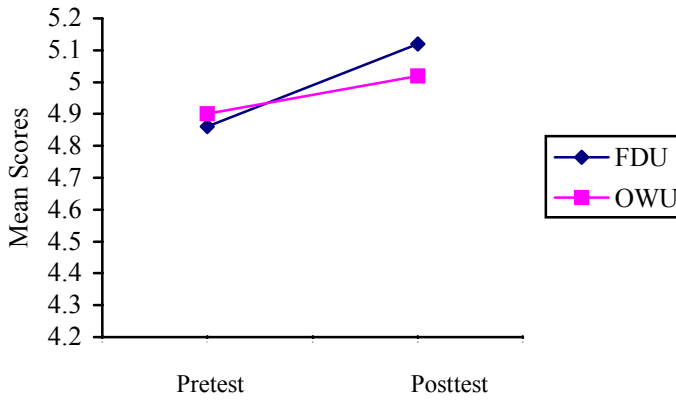


Figure 4.2 Pretest and Posttest Mean Scores for Benevolence Value Type Scores

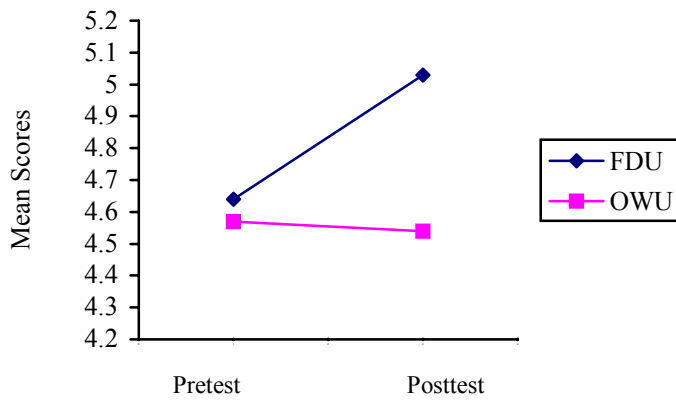


Figure 4.3 Pretest and Posttest Mean Scores for Security Value Type Scores

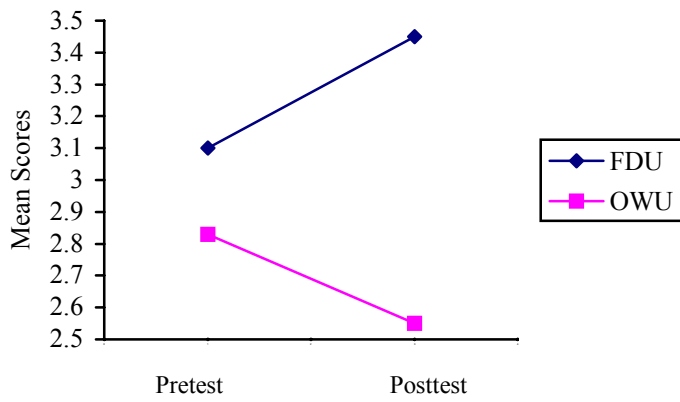


Figure 4.4 Pretest and Posttest Mean Scores for Power Value Type Scores

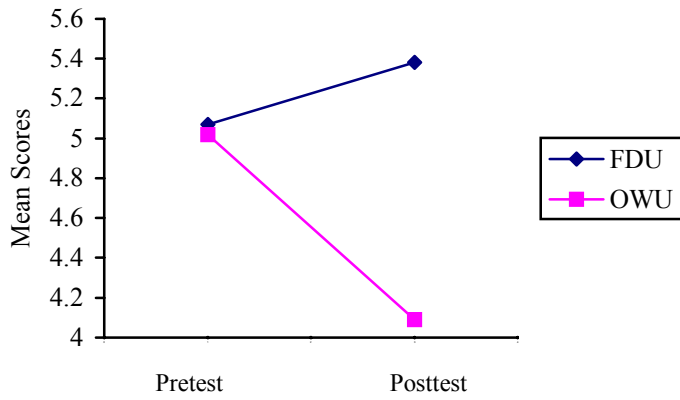


Figure 4.5 Pretest and Posttest Mean Scores for Achievement Value Type Scores

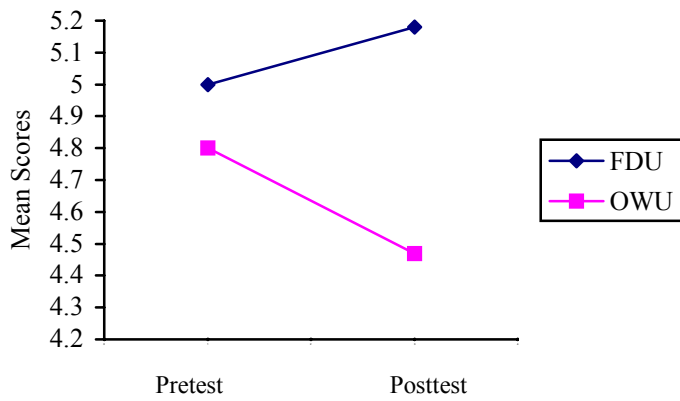


Figure 4.6 Pretest and Posttest Mean Scores for Self-direction Value Type Scores

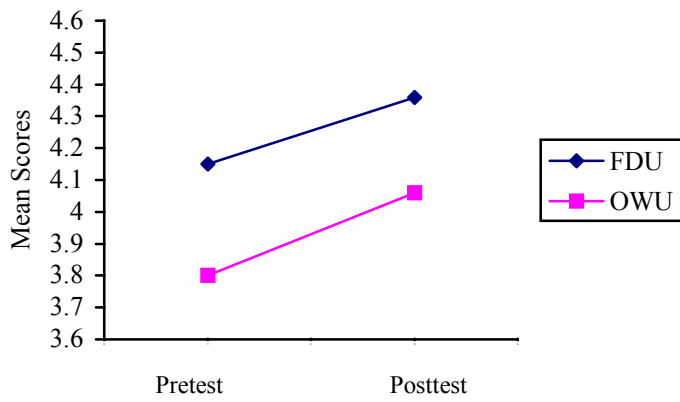


Figure 4.7 Pretest and Posttest Mean Scores for Stimulation Value Type Scores

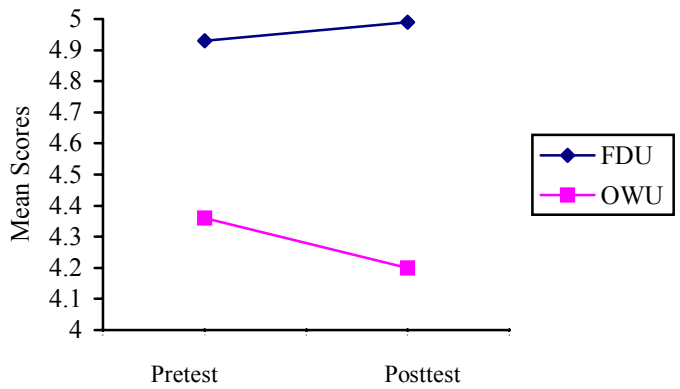


Figure 4.8 Pretest and Posttest Mean Scores for Hedonism Value Type Scores

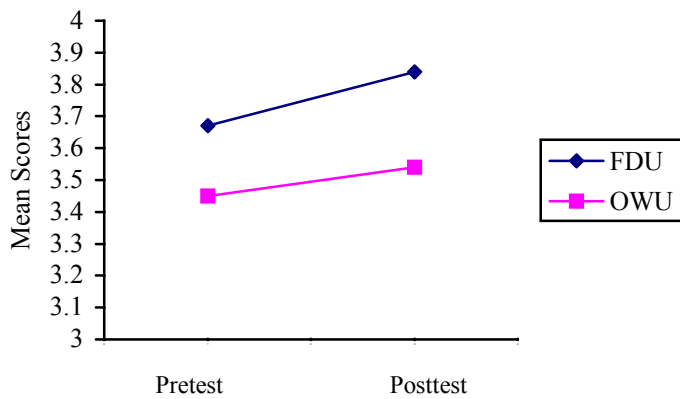


Figure 4.9 Pretest and Posttest Mean Scores for Tradition Value Type Scores

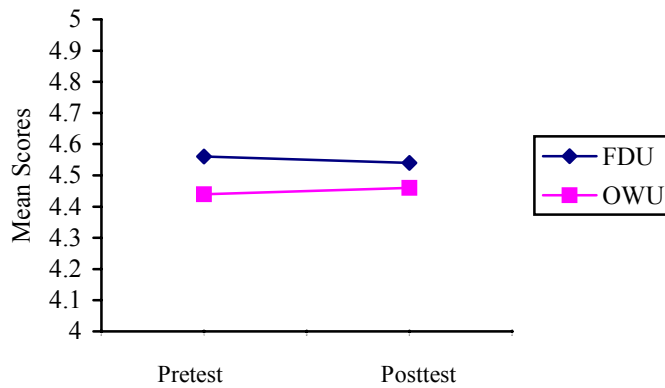


Figure 4.10 Pretest and Posttest Mean Scores for Conformity Value Type Scores

all but universalism and benevolence motivational value types. The Figures revealed a similar directional trend for FDU and OWU students in five of the motivational value types, value types increasing in importance (universalism (4.1), benevolence (4.2), stimulation (4.7), tradition (4.9)) and remaining approximately the same in importance (conformity (4.10)). Four motivational value types displayed a diverging trend in Figures 4.3 (security), 4.4 (power), 4.6 (self-direction) and 4.8 (hedonism). The conformity motivational type (4.10) displayed a near conforming trend line between FDU and OWU students.

At FDU, the value types security (4.3), power (4.4) and achievement (4.5) displayed significant increase in importance to students while universalism (4.1), benevolence (4.2), achievement (4.5), self-direction (4.6), stimulation (4.7), hedonism (4.8) and tradition (4.9) value types display a slight increasing trend. At OWU, there were slight descending trends for the value types for security (4.3), power (4.4), achievement, self-direction (4.6), and hedonism (4.8).

The Figures reveal that the FDU students display, pretest to posttest, a small to significant increase in values in all motivational value types with the exception of

conformity. OWU students split evenly with five motivational types ascending slightly in importance and five motivational types descending slightly in importance.

Figure 4.1 displays the comparison of the statistically significant student change in the motivational type universalism that supports the research hypothesis. Students enrolled in the integrated core intervention curriculum values' increased in importance more than students enrolled in the traditional curriculum. The group mean scores for the students enrolled at FDU increased 6.6%, the third greatest gain in value importance of the ten motivational types. The group mean scores for the students enrolled at OWU increased 1%, the fifth greatest gain in value importance of the ten motivational types.

Figure 4.2 displays the comparison of the statistically significant student change in the motivational type benevolence that supports the research hypothesis. Students enrolled in the integrated core intervention curriculum values' increased in importance more than students enrolled in the traditional curriculum. The group mean scores for the students enrolled at FDU increased 5.2%, the fifth greatest gain in value importance of the ten motivational types. The group mean scores for the students enrolled at OWU increased 2.2%, the third greatest gain in value importance of the ten motivational types.

The motivational value type security found in Figure 4.3 displays the greatest divergence in direction and group mean scores between FDU and OWU students. The divergence may be attributed to the geographic proximity of FDU to New York City and the terrorist attacks on September 11, 2001. The single value, national security, group mean scores increased for FDU students from 3.88 pretest to 5.24 posttest accounting primarily for the trend pattern. The group mean scores for OWU students on the single value, national security, increased to a lesser degree from 4.19 pretest to 4.48 posttest.

The power motivational type value, Figure 4.4, also reflects a divergent trend for students relative to increase and decrease in importance by institution. No single value representing the power motivational type influenced the trend for the students at FDU or OWU. However, each of the five single values mean scores that represent the power type increased slightly for FDU students and decreased slightly for OWU students.

Student value scores were subjected to a dependent paired samples t-test to compare the impact of the different core curricula. The dependent paired samples t-test was computed on the values of the differences of pretest and posttest scores. Mean differences, standard deviations (SD), standard error (SE), critical values (t), degrees of freedom (df) and statistical significance (Sig.) for the SVS ten motivational value types are summarized in Table 4.2. This table reveals that over time students at FDU demonstrated statistically significant ($p < .05$) value change in four motivational types and OWU students did not demonstrate significant value change in any type category. The range of mean scores was greater for the students at FDU than OWU students between the pretest and posttest (FDU, .08 to 2.71; OWU, .07 to 1.37). The FDU students showed increased range in mean scores in all but the stimulation and hedonism motivational value types compared to OWU students.

Supporting the hypothesis, the dependent paired samples t-test for the SVS motivational types universalism (58) (t) of -2.17 and benevolence (58) (t) of -2.70 for FDU students demonstrated statistical significance ($p < .05$) as well as security (58) (t) -3.04 at ($p < .01$). The dependent paired samples t-test for the OWU students for universalism (53) (t) of $-.40$, benevolence (53) (t) -1.08 and security (53) (t) $.11$ did not reach a conventional level of statistical significance ($p < .05$).

Paired Differences

Pretest – Posttest	Mean	SD	SE	t	Df	Sig.
<u>Motivational Type</u>						
Universalism	-2.63 (-.39)	9.32 (7.12)	1.21 (.98)	-2.17 (-.40)	58 (53)	.03* (.69)
Benevolence	-2.36 (-1.02)	6.71 (6.94)	.87 (.94)	-2.70 (-1.08)	58 (53)	.01* (.29)
Security	-2.71 (.09)	6.85 (6.06)	.89 (.82)	-3.04 (.11)	58 (53)	.00* (.91)
Power	-1.76 (1.37)	5.76 (6.18)	.75 (.84)	-2.35 (1.63)	58 (53)	.02* (.11)
Achievement	-1.90 (.80)	5.69 (5.34)	.74 (.73)	-2.56 (1.10)	58 (53)	.01* (.28)
Self-direction	-.81 (.39)	4.85 (4.38)	.63 (.60)	-1.29 (.65)	58 (53)	.20 (.52)
Stimulation	-.64 (-.76)	4.03 (3.95)	.52 (.54)	-1.23 (-1.41)	58 (53)	.22 (.16)
Hedonism	-.20 (.50)	3.27 (3.17)	.43 (.43)	-.48 (1.16)	58 (53)	.63 (.25)
Tradition	-1.19 (-.57)	6.64 (7.19)	.86 (.98)	-1.37 (-.59)	58 (53)	.18 (.56)
Conformity	.08 (-.07)	4.86 (4.17)	.63 (.57)	.13 (-.13)	58 (53)	.89 (.90)

*p < .05.

Table 4.2

Dependent Paired Samples T-test at Farleigh Dickinson University and Ohio Wesleyan

University (in parentheses) for Schwartz Value Survey Ten Motivational Value Types

At FDU two motivational types that achieved statistical significance ($p < .05$) using the dependent paired samples t-test power (58) (t) of -2.35 and achievement (58) (t) of -2.56 . Statistical significance ($p < .05$) was not reached for any of the motivational value types at OWU.

The analysis of the data employing the dependent t-test offers advantages to the MANOVA. The ultimate goal of these statistical analyses was to evaluate the relations between the dependent variables, SVS pretest and posttest scores, by representing a ratio of measures that explain the overall differentiation of the independent variables, the core curricula at FDU and OWU. Instead of treating each group separately, and analyzing raw scores, the dependent t-test examines the difference between the pretest and posttest measures in each subject and analyzes the changes of the paired samples. The MANOVA analysis provides an overall comparison of variability of group mean sums but does not adequately, in this research example, reflect individual change. Some precision is lost relative to the paired comparisons using the MANOVA; however, the dependent t-test present problems with inflated Type I error (Haase and Ellis, 1987; Johnson and Wichern, 1992). The results of the dependent t-test offers strong evidence in support of the hypothesis that the FDU students universalism, benevolence and security values increased more than OWU students. The MANOVA reveals the variability between the groups but does not explicate individual student change.

FDU and OWU group pretest and posttest rankings according to the SVS motivational value type mean scores and standard deviations (SD) are presented in Table 4.3. The mean scores represent FDU and OWU group scores and group score changes between the pretest and posttest. Presenting the mean scores by motivational value type

Value Type	<u>Farleigh Dickinson University</u>				<u>Ohio Wesleyan University</u>			
	<u>Pretest</u>		<u>Posttest</u>		<u>Pretest</u>		<u>Posttest</u>	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Achievement	5.07 (1)	.76	5.38 (1)	.84	5.02 (1)	.71	4.09 (7)	.70
Self-direction	5.00 (2)	.76	5.18 (2)	.88	4.80 (3)	.74	4.47 (4)	.86
Hedonism	4.93 (3)	1.09	4.99 (5)	1.10	4.36 (7)	1.15	4.20 (6)	1.23
Benevolence	4.86 (4)	.75	5.12 (3)	.74	4.90 (2)	.83	5.02 (1)	.87
Security	4.64 (5)	.85	5.03 (4)	.93	4.57 (4)	.89	4.54 (2)	.73
Conformity	4.56 (6)	1.01	4.54 (6)	1.05	4.44 (6)	1.02	4.46 (5)	1.00
Universalism	4.17 (7)	.96	4.54 (6)	1.08	4.49 (5)	.96	4.54 (2)	.92
Stimulation	4.15 (8)	1.07	4.36 (8)	1.42	3.80 (8)	1.36	4.06 (8)	1.20
Tradition	3.67 (9)	1.00	3.84 (9)	1.10	3.45 (9)	1.02	3.54 (9)	1.08
Power	3.10 (10)	1.42	3.45 (10)	1.57	2.83 (10)	1.41	2.55 (10)	1.29

Table 4.3

Student Pretest – Posttest Change Comparison by Mean Rank (in parentheses) of Ten

Motivational Types by Institution.

more clearly delineates the level of importance students at FDU and OWU attached to each value type. In addition, the changes in importance of the motivational value types by rank over time were more easily compared. The students at FDU showed fewer and less drastic position shifts of motivational value types but greater mean change scores pretest to posttest than OWU students. There was a general trend toward increasing standard deviations corresponding to the highest ranked, most important values, to lowest ranked values, least important values, at FDU and OWU. At FDU five of the ten motivational value types achievement, self-direction, stimulation, tradition power maintained their ranked position. Four of the remaining value types benevolence, security, conformity and universalism shifted one position while the hedonism value type descended in rank two positions. At OWU only the last three ranked value types, stimulation, tradition and power maintained pretest to posttest position rank. While the remaining seven value types shifted in a range from one to three positions except for the achievement value type which descended from the first ranked pretest value type to the seventh ranked posttest value type (Mean = 5.02 to 4.09). A common trend revealed between the two schools was found in the rankings of the three lowest ranked motivational type values. The eighth (tradition), ninth (stimulation) and tenth (power) ranked motivational value types are identical at FDU and OWU did not shift pretest to posttest position.

Table 4.4 presents examples of single values representing the ten motivational value types for comparison of students at FDU and OWU. The students at FDU and OWU ranked in common a minimum of five single values in the top seven of all values ($N = 57$) pretest and posttest in value importance as well as the fifty-seventh value. Six

Single Values	<u>Farleigh Dickinson University</u>				<u>Ohio Wesleyan University</u>			
	<u>Pretest</u>		<u>Posttest</u>		<u>Pretest</u>		<u>Posttest</u>	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Family security	6.00 (1)	.97	6.07 (1)	1.30	5.93 (1)	1.06	5.87 (1)	1.12
Freedom	5.73 (2)	1.05	5.76 (6)	1.45	5.87 (4)	.85	5.48 (4)	1.19
True friendship	5.66 (3)	1.04	5.92 (2)	1.13	5.59 (2)	1.06	5.70 (2)	1.11
Successful	5.66 (3)	1.11	5.78 (5)	1.19	5.67 (11)	1.23	5.06 (18)	1.37
Enjoying life	5.66 (3)	1.33	5.83 (4)	1.23	5.44 (6)	1.11	5.26 (7)	1.53
Healthy	5.51 (6)	1.10	5.90 (3)	1.23	5.39 (5)	1.41	5.24 (8)	1.23
Self-respect	5.49 (7)	1.19	5.76 (6)	1.15	5.30 (3)	.90	5.44 (5)	1.24
Social Power	2.05 (57)	2.10	2.37 (57)	2.31	1.54 (57)	1.92	1.09 (57)	1.84

Table 4.4

Examples of Student Pretest – Posttest Change Comparison by Mean Rank (in parentheses) of Single Values by Institution.

of the seven values, except successful, elicit a somewhat consistent response in rankings in overall single value importance. In general, the rankings suggest a fairly consistent

Variable	<u>B</u>	<u>SE B</u>	β
Pretest universalism score	.50	.08	.48**
Campus leadership and community service involvement	.41	.16	.20*
Ethnicity	-.55	.22	-.21*
Size of home town	-.28	.17	-.14
College grade point average	.34	.16	.17*
Sought faculty advice after class	.20	.17	.05
Humanities major	.28	.26	.09
Personal religious conviction	.24	.16	.12

Note. The minus sign for ethnicity indicates that non white students were predictive of value change in the universalism motivational types. The minus sign indicates that students raised in small cities or farms scored higher in posttest.

* $p < .05$.

** $p < .01$.

Table 4.5

Summary of Multiple Regression Analysis for Variables Predicting Mean Posttest Scores in the Universalism Motivational Type

view of the values that are most important, highly ranked, to the students at FDU and OWU over time. The range of mean scores from the first ranked score to the seventh ranked score for FDU students was 6.07 to 5.76 (.31 difference) and for OWU students 5.93 to 5.26 (.67 difference) on the nine point Likert scale.

A multiple regression analysis was conducted to be able to identify the contributions of any indirect effects on student value change for the SVS motivational types universalism, Table 4.5, benevolence, Table 4.6 and security, Table 4.7. In order to avoid some of the problems involved with using change scores as the dependent variable, students mean pretest scores in the universalism motivational type were entered first in the regression analysis on the universalism posttest score. The same procedure was followed in the regression analyses for the benevolence and security motivational types (Feldman, 1972).

Table 4.5 shows the regression results for students' posttest universalism scores. The overall model accounted for the variance ($R^2 = .45$) indicated that 45% of the total variance for the universalism motivational type was explained by the independent predictor variables. The regression on students' posttest universalism scores revealed that the strongest predictor of the posttest score was students' pretest universalism score. The moderate but statistically significant betas for campus leadership and community service activities, ethnicity and college grade point average were predictive of student universalism value change.

Table 4.6 shows the regression results for students' posttest benevolence scores. The overall model accounted for the variance ($R^2 = .42$) indicated that 42% of the total variance for the benevolence motivational type was explained by the independent predictor variables. The regression on the students' posttest benevolence scores revealed that the strongest predictor of the posttest score was students' pretest benevolence score. However, the independent variable personal religious conviction was highly significant ($p < .01$). No other variable demonstrated statistical significance ($p < .05$).

Variable	<u>B</u>	<u>SE B</u>	β
Pretest benevolence score	.39	.40	.39*
Campus leadership and community service involvement	.21	.09	.13
Personal affect of 9.11 terrorist attack on New York City	.10	.18	.05
Gender	-.07	.13	-.05
College grade point average	.11	.13	.07
Sought faculty advice after class	.19	.14	.11
School enrolled	.20	.13	.13
Personal religious conviction	.52	.13	.33*

* $p < .01$.

Table 4.6

Summary of Multiple Regression Analysis for Variables Predicting Mean Posttest Scores in the Benevolence Motivational Type

Table 4.7 shows the regression results for students' posttest security scores. The overall model accounted for the variance ($R^2 = .36$) indicated that 36% of the total variance for the security motivational type was explained by the independent predictor variables. The regression on the students' posttest security scores revealed that the strongest predictor of the posttest score was students' pretest security score. Statistically significant betas for school enrollment, social science majors and personal religious conviction were predictive of student security value change.

In applying the multiple regression strategy those variables that were not near statistical significance ($p < .05$) were deleted in order to discover if any true predictive

Variable	<u>B</u>	<u>SE B</u>	β
Pretest security score	.33	.08	.32*
Campus leadership and community service involvement	.26	.14	.14
Size of home town	.10	.15	.14
School enrolled	.53	.15	.30*
Social science major	.44	.16	.23*
Personal religious conviction	.44	.15	.25*

* $p < .01$.

Table 4.7

Summary of Multiple Regression Analysis for Variables Predicting Mean Posttest Scores in the Security Motivational Type

relationships existed. The sample size warranted this approach. All variables in Table 4.5 displaying the universalism motivational type value regression were included in the original regression analysis as well as the following deleted variables; peer study group interaction, social interaction at a faculty members home, academic major, socioeconomic status, college selection, gender, personal affect of the September 11, 2001 terrorist attack on New York City, parents education and the role of the core curriculum in college selection. In Table 4.6 all the variables were included in the original regression analysis on the benevolence motivational type as well as the following deleted variables: peer study group interaction, social interaction at a faculty members home, academic major, size of home town, socioeconomic status, ethnicity, parents education and the role of the core curriculum in college selection. In Table 4.7 all the

variables were included in the original regression analysis on the security motivational type as well as the following deleted variables: gender, peer study group interaction, social interaction at a faculty members home, personal affect of the September 11, 2001 terrorist attack on New York City, college grade point average, socioeconomic status, ethnicity, parents education and the role of the core curriculum in college selection.

The regression analyses confirm earlier research (Weidman, 1979) that the best predictor of the results of a posttest repeated measure examining student change would be the pretest measure scores. The results of the universalism regression supports a logical thought that students that consider universalism type values that reflect concern for all people and nature would be involved in campus leadership and community service activities. It also stands to reason that students with a higher grade point average would possess superior critical reasoning skills and recognize the importance of protecting the environment and tolerance of others. In examining the results of the regression on benevolence posttest scores personal religious conviction was a predictor variable. This event makes sense in that one of the single values that represents' the benevolence motivational type is 'a spiritual life.'

The security motivational type regression analysis revealed the confounding influence of the proximity of the Farleigh-Dickinson campus to New York City and the site of the terrorist attacks on September 11, 2001. Analysis of data collected in background items relating to the impact on personal values explored the difference of the impact on the student samples. It is worth noting that 18 percent of the OWU population matriculated from the eastern seaboard with 6.15 percent from the states of New York and New Jersey. Isolating the degree of impact on humanitarian value change as a result

of the terrorist attacks was not the focus of this research study. However, the regression analysis of the impact on the student samples from FDU and OWU showed a difference in response in the security motivational type dimension. It is important to note that the mean scores were 4.93 for FDU students and 4.83 for OWU students in response to the background question related to the personal affect of the terrorist attack (Likert scale range from 1 = not affected to 7 = very affected by terrorist attacks). The mean scores for pretest to posttest on the single value national security revealed a greater ascension of importance for FDU students (3.88 pretest to 5.24 posttest) than OWU students (4.19 pretest to 4.48 posttest).

CHAPTER 5

Discussion

In discussing the impact of the core curriculum at the two private liberal arts universities on student humanitarian values, I will first review the research purpose, design methodology, operational definitions and the research hypothesis. Second, I will summarize the data presented in Chapter 4 and offer some speculations about the meaning of the data. Third, there will be a review of the limitations of this study. Finally I will present implications for pedagogy and the justification for higher education to support programmatically the development of student values.

The purpose of this research was to analyze the impact of distinctive core curriculum pedagogical strategies at two private liberal arts universities on student humanitarian values. The two universities participating in this study, Farleigh Dickinson University and Ohio Wesleyan University espouse the promotion of student value development according to university mission statements and institutional literature. Humanitarian values were defined by the recognition of the equivalence of values between one's own loyalties and those of all other individuals and groups and the respect granted to others freely to express similar causes and loyalties without infringement (Royce, 1908; Locke, 1989; Schwartz, 1992). These values were operationalized by the

Schwartz Value Survey; hence, the curricular impact on student humanitarian values was determined by pretest-posttest comparison of mean scores on the Schwartz Value Survey in the motivational value types' universalism, benevolence and security. The value contents, or individual values, that comprise the motivational types' universalism, benevolence and security reflect humanitarian concerns and values. The motivational type goals expressed by the universalism, benevolence and security value contents are motivations that support individual and group requirements for interaction and survival. The goals expressed by the universalism, benevolence and security type values are motivations related to social stability, environmental preservation, and the understanding, appreciation, tolerance and the welfare of all people (Schwartz, 1992). The fundamental principles of survival expressed by universalism, benevolence and security value types are recognized by people's willingness to accept others who are different and treat them justly to support social stability. According to Locke (1989) and Verharen (1993) the individual and group expression of universalism, benevolence and security value types are necessary in order to solve our world wide culture crisis characterized by disunity, disparate power, world hunger, poverty and violence that threatens our very existence.

The only common experience required for all students at FDU and OWU was the core curriculum. All students at FDU and OWU were required to complete a traditional distribution core curriculum that exposed students to a variety of courses across academic disciplines. However, FDU required a supplemental four-course intervention sequence as a part of the core curriculum that was designed to prepare students to confront issues of globalization. A central purpose of the FDU core curriculum intervention sequence was to have students "begin to examine [their] own values while becoming aware of the

differing values of other individuals, groups, and cultures" to become aware of "some of the most basic issues that confront us as responsible members of the human community" (FDU, 1999). The FDU mission to humanize student values was reflected in the core curriculum pedagogical strategy.

The review of the literature on the impact of the curriculum on student values revealed problems in methodological design. The design of this research attempted to overcome the design limitations of previous college impact literature in three ways. First, the selection of the Schwartz Value Survey as the measurement instrument was to address the limits of the CIRP data as a secondary source of analysis. Second, research on the impact of college on student humanitarian values suggested that student background characteristics and institutional structural and organizational characteristics influence student values. Student background variables that were noted as salient influences in the college impact literature were collected for analysis. The selection of the two private liberal arts universities, FDU and OWU, reflect an intentional effort to compare students and institutions that were more similar than dissimilar in student demographic, mission, organizational and structural characteristics. The selection of structurally comparable institutions was made in an attempt to isolate the impact of the curriculum on student value change. Third, a pretest–posttest longitudinal design was used in the study. The same students completed the Schwartz Value Survey for a pretest–posttest between–subject comparison to measure individual student value change rather than drawing conclusions based on a cross sectional model.

The rationale for selecting the Schwartz Value Survey was to overcome the conceptual and measurement problems of secondary analysis, that is, relying on data

collected for purposes other than for value analysis. Over the last two decades educational researchers have relied primarily on Cooperative Institutional Research Program (CIRP) data set and the data set has conceptual and measurement problems. Researchers recognize the methodological and conceptual weaknesses of data that may have been collected for purposes quite different from a researcher's secondary analysis purposes. Since the variables and scales are derived ex post facto the variables may provide less than optimal operational definitions (Pascarella, Ethington and Smart, 1988; Pascarella, Smart and Braxton, 1986). "Put simply, an instrument is valid if it measures what it is being used to measure and not something else" (Grandy, 1988, p. 142). The Schwartz Value Survey measurement instrument was specifically designed to assess value hierarchies of individual and groups overcoming a major limitation of recent research.

The student background variables and college background experiences that were identified in previous research as mediating influences when assessing the impact of college on students were collected for analysis to determine the impact, if any, on student values. There were 19 predictor variables included in the model. Ten variables represented precollege characteristics including gender, age, ethnicity, high school academic achievement, scholastic aptitude test, institutional self-selection, family socioeconomic status, and religious orientation and commitment. Nine variables represented student experiences in college including academic major, college academic achievement, campus leadership and community service involvement, peer interaction, faculty interaction and the effect of the 9.11 New York City terrorist attacks. There was a difference in the institutional selectivity between FDU and OWU. However, a growing

consensus among the literature suggests that institutional selectivity has limited relevance in terms of understanding how a college influences student development (Pascarella, Ethington and Smart, 1988). Regardless, the student samples were not significantly different in college achievement test scores.

The following questions guided this research to analyze the impact of the two private liberal arts universities core curriculum on student humanitarian values. What was the impact on student humanitarian values of a traditional distribution core curriculum with a supplementary integrated intervention strategy that required students to examine personal values, the values of other individuals, groups and cultures? What background effects or other college experiences impact or predict student humanitarian values? These questions were designed to generate and refine new knowledge to make a causal inference whether the curriculum intervention strategy impacted student values to increase in importance more than students who were exposed to the traditional general education core curriculum.

The hypothesis tested was that student humanitarian values will be significantly higher for students who complete a traditional liberal arts distribution core curriculum with a supplementary intervention integrated strategy that encouraged students to examine individual values, the values of other individuals, groups and cultures than students who only complete a traditional liberal arts distribution core curriculum.

Major Findings

The data revealed reasonably supportive evidence that Farleigh Dickinson University was successful in increasing student humanitarian values according to the

results of the Schwartz Value Survey. Student scores on the Schwartz Value Survey in the universalism, benevolence and security motivational types scores increased in importance for students enrolled in the traditional core curriculum that incorporated the supplementary intervention four-course sequence required at FDU more than the students exposed exclusively to the traditional core curriculum at OWU.

Employing the MANOVA to establish group effects, statistical significance ($p < .05$) was revealed for two sources (a) main effects between schools (FDU and OWU) and (b) interactive effects between pretest and posttest times and schools (FDU and OWU). However, the between subject univariate model revealed that only the security motivational type revealed statistical significance ($p < .05$) among the three primary dependent variable motivational types. Universalism and benevolence motivational value types did not demonstrate statistical significance ($p < .05$). The within subject univariate analysis revealed significance ($p < .05$) for the SVS benevolence and security motivational types between pretest and posttest times. The within subject univariate analysis from interactive effects between pretest and posttest times and schools (FDU and OWU) revealed significance ($p < .05$) for security but not for universalism and benevolence motivational types.

As hypothesized significant mean sum differences were evident in the within subject multivariate interactive effect between tests and FDU and OWU students. However, revealed in the univariate model the hypothesized motivational types universalism and benevolence types could not be statistically ($p < .05$) documented; therefore, the hypothesis was not supported for the universalism and benevolence motivational types. The security motivational type did demonstrate significance ($p <$

.05). The benevolence motivational type showed significant ($p < .05$) change for students regardless of school as did the security motivational type. It is worthwhile noting that the universalism motivational type showed near significant interactive effect ($p = .058$) between tests and FDU and OWU students.

The results of the dependent paired samples t-test reflecting individual student change offers strong evidence in support of the hypothesis that the FDU students universalism, benevolence and security values increased more than OWU students. Supporting the hypothesis, the dependent paired samples t-test for the SVS motivational types' universalism, benevolence and security for FDU students demonstrated statistical significance ($p < .05$). The dependent paired samples t-test for the OWU students for universalism, benevolence and security did not reach a conventional level of statistical significance ($p < .05$). The dependent paired samples t-test focuses on individual impact rather than average group impact or differences that respond to a critique of college impact on value research reviewed Pascarella and Terenzini (1991). The dependent paired samples t-test considers the impact of college on student values for individuals whether there is observed significant impact on student values, stabilization of student values or impact that is antithetical to institutional mission.

The power and achievement value types revealed statistical significance ($p < .05$) in the MANOVA univariate analysis and the dependent paired samples t-test. Previous research indicates that student values change toward greater altruism and less concern for authoritarianism and personal power during the college experience (Pascarella and Terenzini, 1991; Terenzini, 1993). The analysis of change between students at FDU and OWU revealed a contrasting pattern. Consistent with earlier research, OWU students

showed less concern for authoritarianism and personal power while FDU students showed a significant increase in the motivational types power and achievement from pretest to posttest. The goals expressed by the security, power and achievement type values are motivations related to social stability, social esteem, social authority and meeting social standards for success (Schwartz, 1992). Hence, it is possible that FDU students place increasing value on having power and achievement in the global world that is emerging, while OWU students stayed the same in these areas.

Multiple regression analysis was performed to learn about the relationship between student precollege background characteristics and college experiences on the Schwartz Value Survey student posttest scores. In the multiple regression analysis the SVS motivational goal types' universalism, benevolence and security posttest scores were used as the dependent variables and student background characteristics and college experiences were the independent variables.

The only dependent variable to be positively related to each of the independent variables and overall was the strongest predictor of the posttest scores were student pretest scores in the multiple regression analysis for the universalism, benevolence and security motivational types. This result supports earlier research conducted that student background experiences prior to college enrollment predispose them to certain ways of making meaning (Pascarella, Ethington and Smart, 1988; Weidman, 1979; Kegan, 1994).

The dependent variables that were positively related and significant for some but not all of the independent variables included student involvement in campus leadership and community service activities, ethnicity, academic major, and college grade point

average. Secondary school achievement, socioeconomic status, institutional structure, gender, age and student-faculty interaction were not significantly related to the results.

Similar to earlier research (Pascarella, Ethington and Smart, 1988; Rhee and Dey, 1996; Terenzini, 1993) students who were more involved in college activities had significantly higher commitment to humanitarian values than students who were less involved in college activities (Rhee and Dey, 1996).

Unlike previous research which found differences in outcomes between scientific and humanistic majors (Jacob, 1957; Thistlewaite, 1973; Vreeland and Bidwell, 1966 cf.), this research revealed mixed results in analyzing the relationship between students' major field of study and student humanitarian values. A positive and significant relationship emerged for social science majors and the student security value posttest scores. In no other analysis was an academic major positively related or demonstrate significance on student values. However, the posttest data was collected at a time in the undergraduate experience when a student would likely have been just introduced into the major field course of study. Most students in this study had been dedicated to the completion of core requirements rather than being fully immersed in the academic major curriculum. Hence, a student's major could not yet have had much effect on student values.

Previous research had indicated that higher performing students had shown greater changes than lower performing students in most value measures (Astin, 1977). Higher performing students with a college grade point average above 3.0 in this study revealed mixed results in predicting the impact of college on student values. Only in the

universalism motivational type was revealed that a higher grade point average had a positive relationship to the universalism posttest score.

Ethnicity, a factor often included in research on the impact of college on student values but previously not found to be positively related to value change (Pascarella and Terenzini, (1991), emerged as statistically significant in predicting posttest scores on universalism. Students of color showed a positive relationship and statistically significant relationship in the universalism motivational type.

It happens to be the case that the security motivational type and the purposes of campus leadership and community service activities are linked together by purpose and definition. The central motivational goal of the security type is the harmony of relationships and safety and stability of society. The purpose of campus leadership and community service activities is to prepare students for service to others through servant leadership. The security motivational type and campus leadership and community service activities are linked by the common commitment to improved human relationships and the protection of others. Similarly a commitment to improved human relationships and society may link together security motivational values (Rosovsky, 1990).

Although students with higher grade point averages are not necessarily more complex thinkers they progress more quickly once they experience cognitive challenges (Perry, 1970; Kegan, 1994). Kegan (1994) found a link between level of complexity and respect for diversity and this study found similar results. It may be the case that benevolence and security value do not demand more complex intellectual discernment.

In this study posttest score of students of color, that is, African-American students, Hispanic students, Asian students and other student nationalities, were positively related to the universalism motivational type. The link between student ethnicity and the universalism motivational type may be explained by student lived experiences and personal experiences of students on a college campus as a student of color. Euro-Americans, the dominant cultural group in the United States, and on the FDU and OWU campuses, may be the students least aware of the manner in which culture influences personal and group interactions (Lynch and Hanson, 1998). There are differences between Euro-American worldview beliefs and values and worldview minority group beliefs and values (Flexor, Simmons, Luft and Baer, 2001). Hence, on a predominant Euro-American campus, students of color or minority culture may be more aware of the importance of understanding, appreciation and tolerance toward all persons, the central motivational goal of the universalism type (Flexor, Simmons, Luft and Baer, 2001).

In the security motivational type the college attended was predictive of student security value posttest scores. The security motivational type regression analysis revealed the confounding influence of the proximity of the Farleigh-Dickinson campus to New York City; the site of the terrorist attacks on September 11, 2001. Data was collected as a part of the SVS student background items that related to the personal affect of the New York City terrorist attack. It is important to note that 18 percent of the OWU population matriculated from the eastern seaboard with 6.15 percent from the states of New York and New Jersey. Isolating the degree of impact on humanitarian value change as a result of the terrorist attacks was not the focus of this research study. However, the

regression analysis of the impact on the student samples from FDU and OWU showed a difference in response in the security motivational type dimension. It is important to note that the mean scores were 4.93 for FDU students and 4.83 for OWU students in response to the background question related to the personal affect of the terrorist attack (Likert scale range from 1 = not affected to 7 = very affected by terrorist attacks). The mean scores for pretest to posttest on the single value national security revealed an increase of importance for FDU students (3.88 pretest to 5.24 posttest) and OWU students (4.19 pretest to 4.48 posttest).

There may have been experiences at Ohio Wesleyan University that impact student values. The increase in the benevolence motivational type dimension and the simultaneous descending trends in the achievement and power motivational type dimensions indicated a shift in student priority toward greater concern for the welfare of others that students interact with daily and less importance on materialism. The trend toward greater altruism and less concern for authoritarianism and personal power was consistent with the research analyses of Pascarella and Terenzini (1991) and Terenzini (1993). However, in evaluation of the data it must be concluded that the impact of the core curriculum at OWU did not provide a forum for the development of student humanitarian values (Terenzini, 1993).

The role of institutional climate, institutional environment, curriculum program and course interventions, and student-faculty interaction with peers were not positively related to student value change. These results are different from previous studies (Jacob, 1957; Pascarella and Terenzini, 1991; Rhee and Dey, 1996). The potential confounding influences of institutional structural variations revealed in previous college impact

research guided the selection of institutions, FDU and OWU, with common structural characteristics to participate in this study in an attempt to isolate the impact of the curriculum on student values.

At OWU it seems to have been assumed that the college experience would foster the development of student values. Other than the institutional commitment expressed in the college literature, there did not appear to be curricular experiences designed to promote student values. It appears to be left to the discretion of individual faculty and staff to integrate or not to integrate values into student course work. It was not surprising then that, without some institutional agreement among faculty or structured curricular experience, OWU student values would not change significantly. In contrast FDU students were required to enroll in a specially designed curricular experience that did impact values with statistical significance in a direction that supported value change. The institutional commitment, faculty commitment and curricular design supported the achievement of the university mission to educate for student value development.

This research did not support earlier research (McLaughlin and Smart, 1988; Rhee and Dey, 1996) that found that church affiliated colleges were more effective in developing student humanitarian values. Students at OWU, a Methodist affiliated institution, did not demonstrate statistical significance in the pretest-posttest value scores comparison while students at FDU, a nondenominational institution, demonstrated statistically significant development of humanitarian values. Manifestation of religious influence at OWU, however, was nonexistent and perhaps more a function at FDU.

An unexpected result in this research study was the positive relationship that emerged between personal religious conviction and the benevolence motivational type

and the security motivational type. According to earlier research, Pascarella and Terenzini (1991) found that college attendance had little impact on student religious values except in research conducted by Astin (1977) that revealed student decreases in student religiosity. However, Rhee and Dey (1996) conducted research that showed church-affiliated schools were more effective in developing student humanitarian values than other types of colleges. The positive and significant relationship between religious conviction and the benevolence motivational type may make sense given that one of the value contents or single values representing the benevolence motivational type is ‘a spiritual life.’ However, this does not explain why the positive relationship emerged between personal religious conviction and the security motivational type. The positive relationship may be related to unspecified factors separate from the college experience.

The results of the MANOVA, dependent paired samples t-test and multiple regression analyses revealed supportive evidence for the hypothesis that the FDU student humanitarian values increased more than OWU students. However, the weight of the evidence did not support unequivocally that the specially designed curriculum was solely responsible for the student universalism, benevolence and security pretest and posttest differences. Results in this research indicate that a number of variables significantly correlated with student value change. Student value change may be due to pre-existing student values, student ethnicity, religious conviction, campus leadership experiences, community service, academic performance and/or academic experiences with the core curriculum. Hence, there are rival variables that may contribute to student value change in the study.

Limitations

The primary limitations of this research were sample size and design problems inherent in college impact research, that is, the inability to control for all external events and lack of random assignment of students to different curriculum. This includes the distinctive impact of the 9.11 terrorist attacks on the FDU students. Additionally, questions arise after reflecting on the outcome of the data analysis on how the values were introduced, if at all, into the course work at FDU and OWU. Familiarity with the teaching methods employed by the faculty may well have provided greater explanatory power.

The sample size represented eighteen percent of the students at FDU and fourteen percent of the students at OWU that matriculated in the fall of 2000. In part the causes for the small sample size were attributable to student attrition, core course scheduling differences between FDU and OWU, and course scheduling conflicts for FDU students. The small sample size compromised the power of the MANOVA results. The survey instrument and study focus required the separation of the ten dependent variables, motivational value types, for analysis limiting the strength of the conclusions.

The distinctive impact on FDU students of the 9.11 terrorist attacks could be anticipated due to the FDU student demographic and the proximity of the FDU campus to New York City relative to the distance from the OWU campus. This was a reason for caution when reviewing the outcome of the security motivational value type in the MANOVA and dependent t-test. The reason for caution was warranted after reviewing the results of the multiple regression analysis on the security motivational type. The multiple regression analysis revealed that the FDU students scores increased more

dramatically than the OWU students in key value contents in the security motivational type that appear to be a result of the proximity of FDU to New York City.

A final design limitation that plagues this research and most longitudinal research on college impact was the lack of a noncollege control group to determine if college experiences or normal maturation were responsible for student value development. According to Pascarella and Terenzini (1991) student value development in college may have a “developmental base” and similar to noncollege persons change may be attributed to growing older and not dependent on the college attendance. Moreover, students do not live in a vacuum and in addition to normal maturation multiple outside experiences including social and cultural events that impact student values. Social and cultural forces make unequivocal conclusions on the impact of college more complex. However, Pascarella and Terenzini (1991) note that college attendance appears to influence student values in consistent ways regardless of social and cultural events.

Directions for Further Research

This study on curricular impact of college on student values overcomes some of the earlier methodological design problems of other studied. It provides data that responds to questions that previously eluded researchers. Implementation of an instrument specifically designed to measure values and more explicit student background data is the corrective approach that makes this research more precise than previous research on college impact on student values. The application of the Schwartz Value Survey measurement instrument is groundbreaking for researchers that want to examine the magnitude, origins, timing and durability of impact of college on student values

(Pascarella and Terenzini, 1991). The Schwartz Value Survey has been accepted around the world in a variety of cross-cultural settings to assess individual value priorities. The SVS presents a reliable method to evaluate the impact of college on student values for the diverse university populations and diverse university environments. The SVS is easy to administer and has been validated in a number of studies that connect value priorities to actual behavior. A sample of topics that employed the SVS include choice of university major (Sagiv, 1997), choice of medical specialty (Schubot, Eliason and Cayley, 1995), voting (Barnea and Schwartz, 1998), consumer behavior (Puohiniemi, 1995), cooperation and competition (Srncic, 1995) and moral behavior (Bond and Chi, 1997). The confirmation of the hypotheses of the various research projects that link self reported value priorities to behavior supports the assumption that self reported values represent behavioral commitment rather than simply anecdotal responses.

The availability and ease of administration of the SVS provides an opportunity to verify institutional effectiveness of the long proclaimed benefit of humanizing student values in higher education. As an analytical tool the SVS is important to clarify the impact of the special elements of within college experiences and the impact of different college environments in between college studies. Directions for future research for among college studies that explain the impact of different types of college environments are public and private institutions, church affiliated and public institutions, multiversities and small liberal arts colleges, community college and liberal arts college, and academic majors. Directions for future research to determine the origin of impact or the unique contributions of special elements of within college experiences may include analysis of the impact of residence hall environments, small living units such as fraternities and

sororities, on or off campus housing, extracurricular clubs, athletic teams, academic majors, service learning experiences and other college experiences.

Repeating this study with design improvements would be advantageous. The results could further confirm the validity of the results of this study on the impact of the curriculum and to make more explicit the impact of teaching method on student value change. Exploring the method of teaching values in the classroom may clarify the origin of student value change and reveal the contributions of the instructor. For example, background item questions related to the methods an instructor employed in the exploration of personal values and the values of other individuals and groups may benefit educational practice. The responses to these background items may not only reveal the value of curricular differences between institutions but also may reveal the effectiveness or lack of effectiveness in teaching methodology. Incorporating a structural measurement instrument to analyze cognitive complexity may expose limitations of students' ability to incorporate or interpret the contents of the motivational value types. For example, there appear to be some parallelisms between Kohlberg's stage 3 and benevolence value contents and Kohlberg's stage 4 and 5 and universalism value contents. An extension of this research design may well serve as a basis for future study on the long-term effects of college or durability of value impact. However, with time other lived experiences that impact values make it difficult to isolate the exact cause for behavioral choices.

Evaluating the impact at more regular intervals during the undergraduate school experience would provide insight into the questions of if and when students experience the greatest magnitude of value change and the origin of the change. A pretest evaluation conducted upon arrival at college would be useful to establish a baseline for student value

priorities. At posttesting, student reporting involvement in leadership positions, service learning, strong religious convictions, very high grades and minority students would need to be excluded. Hopefully, the number of students remaining would be sufficient to evaluate the impact of the core curriculum. Additional research questions to consider are what experiences are original in college that impact student values and what experiences may inspire student involvement that promote the development of student values.

A major limitation that has compromised the research on the impact of college on student values may be resolved by the application of the Schwartz Value Survey measurement instrument. The Schwartz Value Survey offers researchers in higher education new possibilities with improved methodology to obtain data that may provide administrators and program coordinators with valuable data and solid conclusions to guide future decision making. The cross cultural application of the SVS provides an opportunity to analyze and compare the impact of college on student values in international settings.

The results of this research could be interpreted that security, power and achievement motivational types are linked and portray that the curriculum increased the FDU students' desires to be active social players in the emerging global society. In order to know if these three motivational types are linked, a confirmatory factor analysis would have to be done and the results could support this interpretation. In addition, since a higher percentage of FDU students major in business than OWU students who major in economics, this factor may be influential in these results and may need to be controlled in future studies.

Implications for Education

This research compared the impact of two distinctive undergraduate core curricular strategies on student humanitarian values. The results appeared to reveal curricular and structural factors and college experiences that promote student value development. Simply the declaration by an institution to educate for values was not by itself sufficient to impact student humanitarian value change. Institutional commitment and support in the form of curricular programming specifically designed to achieve the educational mission contributed to student value development. FDU exhibited several significant organizational and curricular features that promoted student value change.

- The essence of the FDU institutional mission was reflected with clarity in the pedagogy and content of the core curriculum.
- The core intervention courses represented a framework for common learning. The framework for common learning reflected faculty consensus on what knowledge is necessary to be considered an educated person includes values education.
- The core courses were sequenced over three years and integrated multiple disciplines, instructional mediums and pluralistic perspectives.
- The core courses emphasized understanding of the self, the self in American society, cultural perspectives and global issues (Schmitz, 1992).

Students exposed to the specially designed curricular intervention showed greater increase in humanitarian values than students enrolled in core course work that did not incorporate value education. Curricular design with clear well-defined objectives to support achievement of values development seems to have contributed to student

humanitarian value development. Student humanitarian value development did not appear to be inherent in the traditional core curricular experience.

Secondly, the research confirmed that student involvement in campus leadership and community service activities were associated with supporting student humanitarian value change. This conclusion was supported by earlier research (Pascarella, Ethington and Smart, 1988). This conclusion suggests that promoting and increasing the available opportunities for students to become involved in leadership activities and community service activities would further support the achievement of institutional mission to humanize student values. Third, it may be beneficial to encourage student interaction with people of difference to develop social competence and respect for diversity. Concrete serial interaction may be needed to facilitate understanding of diverse cultures and societies well enough to coexist effectively in a plural economic, political and religious environment (Kolb, 1971; Green, 1999).

Fourth, the instructional method and the timing of the curricular intervention are important considerations in curricular programming. In this study the awareness of the origin and evolution of personal values and the study of values of other individuals and cultures impacted individual student values. The instructional methods are not known in detail, however. Instructional methods that incorporates value self-confrontation (Grube, Mayton and Ball-Rokeach, 1994), dilemma discussions (Blatt, 1969; Blatt and Kohlberg, 1975; Schafli, Rest and Thoma, 1985) and/or challenging students at plus one stage of meaning-making development (Kegan, 1994) have been found to enhance cognitive value/moral development. It is not known if these instructional methods were incorporated into the FDU supplementary curriculum.

Consideration of the timing of the curricular intervention may be considered a factor when reviewing the results of the FDU and OWU students of pretest-posttest scores that took place in the second semester of the freshman and at the conclusion of the first semester junior year. In that time frame the FDU students showed moderately significant change and OWU students did not demonstrate significant value change. The results of the pretest-posttest scores support the idea of Feldman and Newcomb (1970) and support research conducted by Terry (1992). Terry (1992), Feldman and Newcomb (1970) hypothesize that early college experiences are so disquieting that students will retreat into safe and proven behaviors for a time, and only later begin the change process necessary for values development. Terry's (1992) study that analyzed student value change at two different institutions after the first semester of enrollment suggest that the college environments did not exert strong enough press to affect student value change. Neither institution's press was strong enough to influence students in any direction. It is difficult to know whether timing and/or a more powerful curricular design may be the more important influence. In this study a specific curricular design was offered earlier in the undergraduate experience, and it appears to have had influence.

If higher education is to accomplish a fundamental task to educate for values in a global environment, then a structured, purposeful integrated curricular experience may be needed as a core requirement. I would like to suggest that the required curricular experience must not only consider content knowledge but also a commitment to the values of a larger social good.

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APPENDIX A

General Requirements • College Core Curriculum

Maxwell Becton College of Arts and Sciences
Florham-Madison Campus

General Curricular Requirements

Candidates for the degrees of Bachelor of Arts or Bachelor of Science must complete a minimum of 128 credits of course work, including completion of the College's core curriculum, which requires from 51 to 60 credits, depending on exemptions, distributed as outlined below. Programs leading to the Bachelor of Arts degree require from 30 to 44 credits in an area of concentration. The programs for the Bachelor of Science degree require a greater number of credits. Minors require 18 credits and are available in every discipline in the College. The College also offers 24-credit interdisciplinary area minors. In addition to completing the requirements for the College core curriculum and for their major, students shall complete such additional credits in free electives to meet the minimum requirement of 128 credits.

College Core Curriculum Requirements

I. Basic Skills (22-23 credits)

The College of Arts and Sciences is committed to providing its graduates with those fundamental skills needed to communicate and to reason effectively. These Basic Skills requirements are usually fulfilled within the first 64 credits taken at the University.

A. Written Communication (6 credits)

Students will complete ENGW1101 Freshman Writing Workshop I, which emphasizes expository, analytical and persuasive writing, and ENGW1102 Freshman Writing Workshop II, which emphasizes longer papers involving a variety of research techniques. ENGW1101 is prerequisite to ENGW1102. Students must meet proficiency standards before advancing from ENGW1101 to ENGW1102.

On the basis of placement scores, some students may fulfill the writing requirement through a single 3-credit honors course. Other students may be required to complete course work in ENGW0198 Fundamentals of Composition I or ENGW0199 Fundamentals of Composition II to satisfy prerequisite skills before enrolling in ENGW1101. Freshman Writing Workshop I.

B. Public Speaking (3 credits)

Practice in making presentations before small and large groups is emphasized in SPCH1107 Public Speaking.

C. Mathematics (3 or 4 credits)

The basic mathematics course for most students in the College is MATH1128 Mathematical Methods (3 credits). However, students majoring in biology, marine biology, mathematics, computer science, chemistry and physics should enroll in MATH1107 Precalculus (4 credits) or MATH1201 Calculus I (4 credits) instead, as determined by placement testing.

Students who, according to placement testing, lack adequate preparation for these college-level mathematics courses must complete courses in prerequisite skills.

D. Statistics or Computer Training (3 credits)

Students have a choice between MATH1133 Applied Statistics and CSCI1145 Computers and Computing. In MATH1133, they will be introduced to practical statistical applications, with attention to computer programs for statistical analysis. In CSCI1145, they will be introduced to the technology and operation of micro- and mainframe computers. Certain major programs may recommend one or the other of these courses.

E. Modern Language (6 credits)

Students may choose a two-course sequence at the 1001-1002 level from among several languages for training in reading, writing and speaking. Based on placement examination scores, some students may enroll directly in the 1002-level course and some may waive the requirement completely. Students with one or two years of a high school language may register in 1001 or 1002, test out of the requirement or start a new language. Students with three or more years of high school language may not reg-

ister in 1001 in the same language. They either must register for 1002 (or a higher level course), test out of the requirement or start a new language at the 1001 level.

Students whose native language is not English and who need skills development in English may substitute courses in English as a Second Language for the language requirement.

F. Physical Education (1 credit)

Students must acquire a skill in a sport or an athletic activity that can be enjoyed on a lifelong basis.

II. Humanities and Social-Behavioral Sciences (15-18 credits)

This requirement of the Core provides the opportunity for students to become familiar with knowledge and ideas representing the accumulation of intellectual achievements in the areas of communal relationships, aspirations of the human spirit and science.

Students have two options for fulfilling the requirements in the areas of the humanities and the social-behavioral sciences. They may elect introductory courses in three different disciplines in each area or they may elect two introductory courses in two different disciplines and follow one with an intermediate or advanced course.

For students majoring in a discipline in the humanities or social-behavioral sciences, the introductory course in the major discipline is applied to the major requirements rather than to the Core.

The introductory courses in the humanities are ENGL2001 Introduction to Literary Studies,* HIST1201 Ancient Civilizations, HIST1202 Medieval World, HIST1203 Foundations of the Modern World, HIST1204 Modern World: 1776 to the Present, PHIL1102 Introduction to Philosophy, PHIL1101 Introduction to Logic, ART1205 Development of Art I,** ART1206 Development of Art II,** THEA1201 Development of Theater I,** THEA1202 Development of Theater II,** THEA3330 History of the Film,** MUSIC2201 Survey of Music History and MUSIC3201 Development of American Jazz and Popular Music.** After taking one of these introductory courses, a student may follow up with any nonintroductory

*The follow-up course in literature must be an English/American literature course or a literature in translation course.
**The follow-up course in fine arts must be a discussion/lecture course.



College Core Curriculum

Maxwell Becton College of Arts and Sciences
Floham-Madison Campus



course in the same discipline, or may take an introductory course in another discipline. (Each discipline is identified by its four-letter prefix.)

The introductory courses in the social-behavioral sciences are ANTH1201 Physical Anthropology, ANTH1202 Cultural Anthropology, ECON1101 Introduction to Microeconomics, ECON1102 Introduction to Macroeconomics, POLS1201 American Government, PSYC1201 General Psychology and SOCI1201 Introduction to Sociology. After taking one of these introductory courses, a student may follow up with any nonintroductory course in the same discipline, or may take an introductory course in another discipline. (Each discipline is identified by its four-letter prefix.)

III. Laboratory Sciences (8–10 credits)

This requirement of the Core assures that students receive training in the scientific method and in the procedures of laboratory experiments.

Students have several options for fulfilling the laboratory sciences requirement.

Those majoring in one of the sciences will complete two 4-credit courses in a discipline other than the major from among BIOL1201, BIOL1203 Biological Sciences I; BIOL1202, BIOL1204 Biological Sciences II; CHEM1201, CHEM1203 General Chemistry I; CHEM1202, CHEM1204 General Chemistry II; GEOL2204 Paleontology and Paleocology; PHYS1001, PHYS1011 General Physics I; PHYS1002, PHYS1012 General Physics II; PHYS2003, PHYS2013 General Physics with Calculus I; PHYS2004, PHYS2014 General Physics with Calculus

II. In most cases, a specific sequence will be prescribed by the major program.

Students majoring in one of the humanities or social-behavioral sciences will usually complete three 3-credit courses in at least two different science disciplines. They may elect introductory courses in three different disciplines, or they may elect two introductory courses in two different disciplines and follow one with an intermediate or advanced course. Alternatively, they may elect the 4-credit science courses instead.

Students choosing 3-credit courses may select from among the following: BIOL1001 Principles of Modern Biology, CHEM1001 Current Issues in Chemistry, GEOL1101 Introductory Geology and PHYS1003, PHYS1013 Physics in the Modern World.

Students may also satisfy the requirement by mixing one 4-credit and two 3-credit courses.

IV. University Core (Interdisciplinary Studies) (12 credits)

CORE1001 Perspectives on the Individual, CORE2002 The American Experience: The Quest for Freedom, CORE2003 Cross-cultural Perspectives and CORE3004 Global Issues.

V. Freshman Seminar (1 credit)

To help successfully make the transition to college life and studies, FDU has developed its Freshman Seminar program. Required of all entering students at the

University, the program builds on student orientation experiences and has been recognized as a national model. During the course of a semester, topics such as academic support, human diversity, wellness, self-defense and health-related issues, including drug and alcohol awareness, are presented and discussed from the perspective of shared concerns of the University family.

Waivers

Students may test out of any College core requirement except ENGW1102 Freshman Writing Workshop II, SPCH1107 Public Speaking and physical education. The department in charge of the specific course will administer the examination. Students who test out of a core requirement may use the equivalent credits in any area of interest.

The Major

Each student must select a major, consisting of group-related courses in an area of specialization, before entering the fifth or sixth semester. The courses in a major must total at least 30 credits including introductory-level courses, but may not total more than 42 (except psychology, which totals 44) in a single discipline for programs leading to the Bachelor of Arts degree. A greater degree of specialization is allowed in programs leading to the Bachelor of Science degree. Details and explanations of the various major programs are set out in the following pages. A 2.33 cumulative grade point ratio in the major and, if applicable, in the second major or minor is required in the College of Arts and Sciences in order to graduate.

Electives

Students may wish to take introductory courses in their major field of interest before the fifth or sixth semester. Other electives may be chosen from courses offered in any of the undergraduate colleges if prerequisites can be met. Qualified students may request permission to elect graduate courses in their seventh and eighth semesters.

Physical Education

One credit is required; however, students may take up to 6 credits in meeting the minimum requirements for a degree.

APPENDIX B

Degrees and Special Programs

Requirements for All Degrees The Bachelor of Arts Degree

Cultural Diversity Requirement

Beginning with those students entering in 1993, all students at Ohio Wesleyan must complete one unit course with a substantial focus on Non-Euro-American topics. Such courses will deal with the peoples and cultures of Africa, Asia (including the Middle East), Latin America, Native North America (Amerindians), and Oceania or with American ethnic minorities who trace their ancestry to one of these regions. Such courses are listed below and are designated in the Schedule of Classes.

It is acceptable for a course to meet both the cultural diversity requirement and another requirement. For example, a diversity course could also be used as a course in a student's major or as a distribution requirement.

Students who spend a semester or more in a University approved, off-campus study program in Africa, Asia (including the Middle East), Latin America, Native North America or Oceania would meet the cultural diversity requirement through their off-campus experience.

Those courses which meet the diversity requirement are: ART 348, 400.1; BWS 122, 126, 128, 224, 274, 342, 343, 348, 350, 368, 370; ECON 300.4; 353, 370; EMAN 300.4; ENG 224, 274, 364, 366, 368, 370; FREN 255, 257, 379; GEOG 110, 345, 334; HMCL 127, 227, 265, 375, 499A; HIST 115, 116, 322, 323, 324, 325, 331, 332, 333, 334; MUS 347, 348; PG 260, 345; REL 104, 111, 311, 316, 336, 341, 343, 344, 346, 352, 353; SOAN 111, 291, 292, 293, 294, 295, 345, 354, 357, 360, 367; SPAN 255, 258, 350, 352, 355, 362, 364, 499 (special sections only when concentration is Latin America); WOMS 499E.

Proficiency in Writing

Any instructor in the University may submit, in addition to the regular grade in a course for any student, a supplementary evaluation in English composition. Any unsatisfactory (U) evaluation, (including U's in courses taken credit/no entry, even though credit may not have been earned and the course not entered on the record), remands the student to the Writing Resource Center and must be cleared within the next semester in which the student is enrolled. Failure to be certified for release at the end of the following semester will result in review for retention in the University by the Committee on Academic Status. Seniors with U's on their record may not graduate until the U is removed. All U notations will be erased from the student's academic record once clearance is certified to the Registrar by the Writing Resource Center. Until a student has completed ENG 105, he or she will not normally be tutored in the Writing Resource Center.

The Bachelor of Arts Degree

Unit Courses

In addition to the requirements above for all Ohio Wesleyan degrees, each candidate for the Bachelor of Arts must complete or fulfill the following:

Of the 34 graduation units, 31 must be full-unit courses or 1.95-unit courses. Major

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The Bachelor of Arts Degree

more than two may be earned in the same varsity sport. Only one unit of music organizations may be counted in the 34 units required for graduation.

At least 15 full-unit or 1.25-unit courses must be upper level (numbered 250 and above). To count toward the upper level course requirement, combinations of modular courses in the same department must be numbered 250 or above.

Majors

Students must complete a major as defined by a department or approved program, including approved interdisciplinary majors and programs, with at least a C average (2.00). This average will be computed using grades for all courses a student has completed in the major department.

Students should declare their major by the end of their sophomore year since registration for specific courses is sometimes dependent upon that declaration. Once declared, students can easily change their major.

Requirements for a major may range from a minimum of eight to a maximum of 15 full unit or 1.25 unit- courses including required cognates and prerequisites. (State certification requirements in elementary education may exceed the 15-course maximum.) No more than 13 courses in a single discipline (English, Mathematics, Computer Science, French, as examples) and no more than 17 courses within a single department (Mathematics and Computer Science, as examples) may be counted in the 34 units required for graduation. For these computations, two half-unit modules in the same discipline and each 1.25-unit course will count as the equivalent of a single course. Service or activity courses are not included in the calculations.

Completion of a major may include a capstone experience such as independent study or research, seminar participation, or creative work or performance. The appropriateness and nature of such an experience is determined by each department or program.

Minors (Optional)

Students may also select one or more minors in departments or programs which have defined such tracks. A minor will consist of no less than five and no more than seven courses. A student may not major and minor in the same discipline. Courses taken on a credit/no entry basis may be counted in the minor at the discretion of the department or program under which the minor is offered. Students must maintain at least a C average (2.00) in their minor program(s). This will be computed using grades for all courses a student has completed in the minor department(s).

Foreign Language Competency

To be certified as competent in a foreign language, (French, German, Ancient Greek, Italian, Latin, Russian, Spanish, Swahili, or any other currently listed in the Catalogue), students may meet the requirement in one of two ways:

A. **Standardized Testing.** Distinguished performance on one of the following standardized tests of foreign language ability will result in exemption from the foreign language requirement:

1. A score of 630 or higher on a foreign language SAT-II subject test of the College Entrance Examination Board. (A score of 460 places a student in the second semester of the language.)

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The Bachelor of Arts Degree

2. A score of 3 or above on the Advanced Placement Examination in a foreign language.

B. Course Completion. Students may also demonstrate competency by passing the second semester of the beginning language (111). Students who have had three or more years of a foreign language on the secondary level, including the senior year, and who wish to fulfill the competency requirement with that language must take a placement/proficiency test at Ohio Wesleyan. This test is given during new student orientation.

Students who elect language courses with numbers lower than their placement level will not receive graduation credit for those courses, although the grades will count in their semester and cumulative averages. Courses to meet the foreign language competency requirement may not be taken credit/no entry.

Students whose native language is not English are exempt from the foreign language competency requirement.

Some forms of learning disabilities prevent students from successfully completing this requirement. Students with a documented learning disability may take an alternate path to the baccalaureate degree. Students may contact the Office of Student Services or the Academic Advising Office for information concerning a foreign language requirement waiver.

Distribution Requirements

To ensure that students' programs include exposure to a broad spectrum of disciplines, the University requires distributional study in the social and natural sciences, the humanities, and the arts. *A maximum of two courses in the major discipline may be applied toward the distribution requirements.* Students with more than one major may apply two courses in each major discipline toward the appropriate distribution requirements. A discipline may be served at Ohio Wesleyan by a program or department. Several departments currently include distinct disciplines. In these cases, a student may satisfy a group requirement within one department.

To satisfy the University distribution requirements, each student must complete up to ten courses selected from among the following groups of disciplines. Note that students majoring in certain disciplines listed at the end of this section have special requirements.

Group I (Social Sciences). Each student must take three units. Two courses must be in one of the following disciplines, and the third course must be in a second discipline.

Black World Studies: 126, 128, 348, 350
Economics (ECON courses only): all courses below 490
Geography: all courses *except* 353
History: all courses
Journalism: all courses *except* 355, 356, 360, 361, 375, 376, 377, 378, 379, 380, 382
Politics and Government: all courses
Psychology: all courses *except* 210, 295, 310, 420
Sociology/Anthropology: all courses

Group II (Natural Sciences). Each student must take at least three units. Two courses must be from one discipline, and the third may be from the same or a different discipline.

Astronomy: all courses

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Botany/Microbiology: all courses
Chemistry: all courses
Geology: all courses below 490
Physics: all courses
Zoology: all courses

Group III (Humanities Literature). Each student must take three units. No more than two courses may be in any one of the following disciplines.

Black World Studies: 122, 342, 343
English: all literature courses; *excluded* are 105, 254, 260, 265, 291, 295, 310, 312, 314, 316, 318, 319, 480, 482
French: 350, 351, 355, 359, 364, 365, 366, 371, 372, 499
German: 361, 363, and 365
Humanities-Classics: all courses with HMCL designation, GREE 491, and LATI 225, 491
Philosophy: all courses *except* 369
Religion: all courses *except* 390-399 and 490-499
Spanish: 350, 351, 352, 355, 356, 361, 362, 363, 364, 365, 367, 369, 375, 377, 499
Theatre/Dance: 341, 351, 361, 371, 381, 499
Women's Studies: 210

Group IV (Arts). Each student must take one unit from among the following courses:

English: 254
Fine Arts: all courses *except* 301 and 307.
Music: 105, 229, 347, 348
Theatre: all courses *except* 237, 247, 337, 341, 347, 351, 361, 371, 407, 417, 427, 437, 447, 457, 467, 477, 487, 490, 491
Dance: 115, 125, 215, 315

Exceptions. Majors in Fine Arts (with the exception of those concentrating in art history), Mathematics, Computer Science, Music, Physical Education, and Theatre/Dance fulfill distribution requirements by selecting two units from Groups I, II, and III, and one unit from IV.

APPENDIX C

VALUE SURVEY

In this questionnaire you are to ask yourself: "What values are important to ME as guiding principles in MY life, and what values are less important to me?" There are two lists of values on the following pages. These values come from different cultures. In the parentheses following each value is an explanation that may help you to understand its meaning.

Your task is to rate how important each value is for you as a guiding principle in your life. Use the rating scale below:

- 0--means the value is not at all important, it is not relevant as a guiding principle for you.
- 3--means the value is important.
- 6--means the value is very important.

The higher the number (0, 1, 2, 3, 4, 5, 6), the more important the value is as a guiding principle in YOUR life.

- 1 is for rating any values opposed to the principles that guide you.
- 7 is for rating a value of supreme importance as a guiding principle in your life; ***ordinarily there are no more than two such values.***

In the space before each value, write the number (-1,0,1,2,3,4,5,6,7) that indicates the importance of that value for you, personally. Try to distinguish as much as possible between the values by using all the numbers. You will, of course, need to use numbers more than once.

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

opposed to my values	not important			important			very important	of supreme importance
-1	0	1	2	3	4	5	6	7

Before you begin, read the values in List I, choose the one that is most important to you and rate its importance. Next, choose the value that is most opposed to your values and rate it -1. If there is no such value, choose the value least important to you and rate it 0 or 1, according to its importance. Then rate the rest of the values in List I.

VALUES LIST I

- 1 ___EQUALITY (equal opportunity for all)
- 2 ___INNER HARMONY (at peace with myself)
- 3 ___SOCIAL POWER (control over others, dominance)
- 4 ___PLEASURE (gratification of desires)
- 5 ___FREEDOM (freedom of action and thought)
- 6 ___A SPIRITUAL LIFE (emphasis on spiritual not material matters)
- 7 ___SENSE OF BELONGING (feeling that others care about me)
- 8 ___SOCIAL ORDER (stability of society)
- 9 ___AN EXCITING LIFE (stimulating experiences)
- 10___MEANING IN LIFE (a purpose in life)

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

opposed to my values	not important			important			very important	of supreme importance
-1	0	1	2	3	4	5	6	7

- 11 ___ POLITENESS (courtesy, good manners)
- 12 ___ WEALTH (material possessions, money)
- 13 ___ NATIONAL SECURITY (protection of my nation from enemies)
- 14 ___ SELF RESPECT (belief in one's own worth)
- 15 ___ RECIPROCATION OF FAVORS (avoidance of indebtedness)
- 16 ___ CREATIVITY (uniqueness, imagination)
- 17 ___ A WORLD AT PEACE (free of war and conflict)
- 18 ___ RESPECT FOR TRADITION (preservation of time-honored customs)
- 19 ___ MATURE LOVE (deep emotional & spiritual intimacy)
- 20 ___ SELF-DISCIPLINE (self-restraint, resistance to temptation)
- 21 ___ PRIVACY (the right to have a private sphere)
- 22 ___ FAMILY SECURITY (safety for loved ones)
- 23 ___ SOCIAL RECOGNITION (respect, approval by others)
- 24 ___ UNITY WITH NATURE (fitting into nature)
- 25 ___ A VARIED LIFE (filled with challenge, novelty and change)
- 26 ___ WISDOM (a mature understanding of life)
- 27 ___ AUTHORITY (the right to lead or command)
- 28 ___ TRUE FRIENDSHIP (close, supportive friends)
- 29 ___ A WORLD OF BEAUTY (beauty of nature and the arts)
- 30 ___ SOCIAL JUSTICE (correcting injustice, care for the weak)

* * * * *

VALUES LIST II

Now rate how important each of the following values is for you as a guiding principle in YOUR life. These values are phrased as ways of acting that may be more or less important for you. Once again, try to distinguish as much as possible between the values by using all the numbers.

Before you begin, read the values in List II, choose the one that is most important to you and rate its importance. Next, choose the value that is most opposed to your values, or--if there is no such value--choose the value least important to you, and rate it -1, 0, or 1, according to its importance. Then rate the rest of the values.

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

opposed to my values	not important			important				very important	of supreme importance
-1	0	1	2	3	4	5	6	7	

- 31___ INDEPENDENT (self-reliant, self-sufficient)
- 32___ MODERATE (avoiding extremes of feeling & action)
- 33___ LOYAL (faithful to my friends, group)
- 34___ AMBITIOUS (hard-working, aspiring)
- 35___ BROADMINDED (tolerant of different ideas and beliefs)
- 36___ HUMBLE (modest, self-effacing)
- 37___ DARING (seeking adventure, risk)
- 38___ PROTECTING THE ENVIRONMENT (preserving nature)
- 39___ INFLUENTIAL (having an impact on people and events)
- 40___ HONORING OF PARENTS AND ELDERS (showing respect)
- 41___ CHOOSING OWN GOALS (selecting own purposes)
- 42___ HEALTHY (not being sick physically or mentally)
- 43___ CAPABLE (competent, effective, efficient)
- 44___ ACCEPTING MY PORTION IN LIFE (submitting to life's circumstances)
- 45___ HONEST (genuine, sincere)
- 46___ PRESERVING MY PUBLIC IMAGE (protecting my "face")
- 47___ OBEDIENT (dutiful, meeting obligations)
- 48___ INTELLIGENT (logical, thinking)
- 49___ HELPFUL (working for the welfare of others)
- 50___ ENJOYING LIFE (enjoying food, sex, leisure, etc.)
- 51___ DEVOUT (holding to religious faith & belief)
- 52___ RESPONSIBLE (dependable, reliable)
- 53___ CURIOUS (interested in everything, exploring)
- 54___ FORGIVING (willing to pardon others)
- 55___ SUCCESSFUL (achieving goals)
- 56___ CLEAN (neat, tidy)
- 57___ SELF-INDULGENT (doing pleasant things)

BACKGROUND ITEMS

Your Sex (Circle): 1. Male 2. Female

Your age: ____ Years

Of which of the following groups are you a member? (Circle)

- | | | |
|--------------------------------------|------------------------|------------------------|
| 1. American Indian or Alaskan Native | 3. Black, non-Hispanic | 5. White, non-Hispanic |
| 2. Pacific Islander | 4. Hispanic | 6. Other _____ |

What is your academic major? (Circle)

- Social-Behavioral sciences & Education** (Anthropology, Business, Communications, Economics, General Studies, Hotel & Restaurant Management, History, International Studies, Journalism, Law, Political Science, Politics and Government, Psychology, Sociology, Women's Studies)
- Humanities & Arts** (Dance, English, Fine Arts, Foreign Language, Literature, Music, Philosophy, Religion, Speech, Theatre)
- Natural sciences & Medicine** (Astronomy, Biology, Chemistry, Engineering, Environmental Science, Geology, Laboratory Science, Mathematics, Physics, Zoology)
- Other** _____ (please name or write unknown)

Your college cumulative Grade Point Average (Circle):

- | | | |
|-----------------|-----------------|-----------------|
| 1. 3.51 to 4.00 | 3. 2.51 to 3.00 | 5. 1.51 to 2.00 |
| 2. 3.01 to 3.50 | 4. 2.01 to 2.50 | 6. ≤ 1.50 |

Your high school cumulative Grade Point Average (Circle):

- | | | |
|-----------------|-----------------|-----------------|
| 1. 3.51 to 4.00 | 3. 2.51 to 3.00 | 5. 1.51 to 2.00 |
| 2. 3.01 to 3.50 | 4. 2.01 to 2.50 | 6. ≤ 1.50 |

Your SAT score (If Applicable) (Circle):

- Greater or equal to 1000
- Less or equal to 990

Your ACT score (If Applicable) (Circle):

- Greater or equal to 23
- Less or equal to 22

How many additional courses do you have to complete in order to fulfill your college core curriculum requirements or university distribution requirements? (Circle) (estimate if not certain) 0 1 2 3 4 5 6 7 ≥ 8

In deciding where to go to college, how important to you was the college core curriculum or the university distribution requirement (NOT major field of study)? (Circle a number)

Not important Very important

- 1 2 3 4 5 6 7

While in college how involved have you been in campus leadership and community service activities? (Circle a number)

Not at all Very involved

- 1 2 3 4 5 6 7

While in college how often did you: study with other students? (Circle a number) Not at all Occasionallly Frequently

- 1 2 3 4 5 6 7

While in college how often did you: ask a teacher for advice after class? (Circle a number) Not at all Occasionallly Frequently

- 1 2 3 4 5 6 7

While in college how often did you: were a guest in a teacher's home? (Circle a number) Not at all Occasionallly Frequently

- 1 2 3 4 5 6 7

What is your best estimate of your parents total income last year? (consider all income before taxes). (Circle)

- | | | |
|-----------------------|--------------------|----------------------|
| 1. Less than \$35,000 | 3. \$50,000-69,999 | 5. \$100,000-150,000 |
| 2. \$35,000-\$49,999 | 4. \$70,000-99,999 | 6. \$150,000 or more |

How many years of education has each person completed (since 1st grade)? (leave blank if not known)

____ Your Father

____ Your Mother

With regard to religion, with which religious group do you identify? (Circle)

- | | | |
|--------------|-------------------|----------------|
| 1. Buddhism | 4. Islam | 7. Other _____ |
| 2. Christian | 5. Judaism | 8. None |
| 3. Hinduism | 6. Roman Catholic | |

How religious are you, if at all? (Circle a number)

Not at all Very religious

- 1 2 3 4 5 6 7

How did the terrorist attack on New York City on September 11, 2001 affect you, if at all? (Circle a number)

Not at all Very affected

- 1 2 3 4 5 6 7

In what kind of a place did you grow up? (Circle): 1. large city (500,000+) 2. small city 3. rural area 4. Farm

APPENDIX D

Common Data Set 2000-2001 Information

Address Information	Farleigh Dickinson University Madison, NJ 07940	Ohio Wesleyan University Delaware, OH 43015
Source of Institutional Control & Classification	Private nonprofit & coeducational	Private nonprofit & coeducational
Academic calendar	Semester	Semester
Degrees offered	Associate Terminal Bachelor's Master's Post-master's certificate	Bachelor's

Enrollment and Persistence

First-time, first-year degree seeking freshman	Men – 245 Women – 263	Men – 259 Women – 277
Total undergraduates	Men – 939 Women – 1067	Men – 881 Women – 965
Total undergraduates (including part-time)	2526	1880

Enrollment by Racial/Ethnic Category

Nonresident aliens	4/64/66 *	62/220/220*
Black, non-Hispanic	31/145/152 *	36/90/92 *
American Indian or Alaskan Native	0/4/4 *	3/3/3 *
Asian or Pacific Islander	18/67/70 *	9/33/33 *
Hispanic	37/147/148 *	7/30/31 *
White, non-Hispanic	381/1814/1864 *	411/1469/1490 *
Race/ethnicity unknown	42/196/222 *	8/11/11 *
Total	513/2437/2526 *	536/1856/1880 *

* First-time, first-year/Degree seeking undergraduates/Total Undergraduates

Persistence and Retention

Number of Bachelor's degrees awarded from July 1, 1999 to June 30, 2000	387	448
Initial 1994 cohort	250	480
Number of initial 1994 cohort who completed degree in four years or less by August 31, 1998	66	300
Number of initial 1994 cohort who completed degree in five or six years or less by August 31, 2000	53	33
Total number of initial 1994 cohort who completed degree in six years or less by August 31, 2000	119	333
Six-year graduation rate	47.6%	69.7%
Percentage of cohort enrolled as of date the institution calculates official enrollment in fall 2000 of all full-time bachelor's degree seeking undergraduate students who entered as freshman in fall 1999.	76.0%	80.9%

First-Time, First-Year (Freshman) Admission

Total first-time, first-year (freshman) students who applied.	2016	2206
Total first-time, first-year (freshman) students who were admitted.	1668	1642
Total first-time, first-year (freshman) students who enrolled.	508	536

Freshman Profile

Percent of total first-time, first-year (freshman) who submitted high school class rank	80.2	69.8
Percent in top tenth of high school graduating class	7.5	29.1
Percent in top quarter of high school graduating class	24.5	54.8
Percent in top half of high school graduating class	60.0	78.6
Percent in bottom half of high school graduating class	40.0	21.4
Percent in top quarter of high school graduating class	11.2	5.6
Percent submitting SAT scores	98.1	68
Number submitting SAT scores	504	364
Percent submitting ACT scores	0	62
Number submitting ACT scores	0	333
Verbal SAT score that 25 percent scored at or below	440	540
Math SAT score that 25 percent scored at or below	550	650
Verbal SAT score that 75 percent scored at or above	450	550
Math SAT score that 75 percent scored at or above	550	650

Percent of first-time, first-year (freshman) students with SAT scores in each range

Farleigh Dickinson University			Ohio Wesleyan University		
	SAT I Verbal	SAT I Math		SAT I Verbal	SAT I Math
700-800	3.3	.6	700-800	10.3	14.2
600-699	12.1	12.5	600-699	44.8	39.7
500-599	34.1	43.1	500-599	33.8	33.6
400-499	44.1	37.8	400-499	10.0	11.5
300-399	6.9	6.0	300-399	.9	.9
200-299	.6	0	200-299	0	0

Percent of first-time, first-year (freshman) Ohio Wesleyan University students with ACT scores in each range

	ACT Composite	ACT English	ACT Math
30-36	12.7	16.3	14.3
24-29	59.5	47.6	55.2
18-23	27.8	34.5	27.8
12-17	0	1.6	2.8
6-11	0	0	0
Below 6	0	0	0

Student Life

Percent of total first-time, first-year (freshman) who are from out of state (excluding international/non-resident aliens)	15	38
Percent of total undergraduates who are from out of state (excluding international/non-resident aliens)	14	40
Percent of total first-time, first-year (freshman) who are age 25 and older	1	0
Percent of total undergraduates who are age 25 or older	17	1.3
Average age of first-time, first-year (freshman) full-time students	18	18
Average age of full time students	20	20
Average age of total undergraduates (full-time and part-time)	20	23

Annual Expenses

Tuition	\$16,626	\$21,880
Required fees	\$987	\$0
Room and board (on-campus)	\$6,936	\$6,610
Room only (on-campus)	\$3,908	\$3,330
Board only (on-campus)	\$3,028	\$3,280

Financial Aid

First year degree seeking freshman	845	536
Number of total first-time, first-year (freshman) who receive financial aid	N/A	335
On average, the percentage of need that was met of students who received any need-based, excluding any resources that were awarded to replace estimated family contribution (PLUS loans, unsubsidized loans, and private alternative loans).	N/A	100%
Average financial package, excluding any resources that were awarded to replace estimated family contribution (PLUS loans, unsubsidized loans, and private alternative loans).	\$15,500	\$22,124
Average need-based gift award	N/A	\$16,577
Average need-based self-help award, excluding any resources that were awarded to replace estimated family contribution (PLUS loans, unsubsidized loans, and private alternative loans).	N/A	\$5,109
Number of students who had no financial need and who received non-need based gift aid.	N/A	194
Average dollar amount of non-need-based gift aid awarded to students who had no financial need	N/A	\$10,815

Instructional Faculty and Class Size

Total number of instructional faculty	107/154/261 *	125/51/176 *
Total number who are members of minority groups	14/14/28 *	8/5/13 *
Total number of women	29/47/76 *	40/30/70 *
Total number of men	78/107/185 *	85/21/106 *
Total number who are nonresident aliens (international)	0/0/0 *	2/0/2 *
Total number with doctorate, first professional, or other terminal degree	77/n.a/77 *	124/17/141 *
Total number whose highest degree is a master's but not a terminal master's	17/n.a/17	1/34/35 *
Total number whose highest degree is a bachelor's	0/n.a/0	0/0/0 *
Total number whose highest degree is unknown	13/4/167 *	0/0/0 *

* Full-time/Part-time/Total

Number of Class Sections with Undergraduates Enrolled

Fall 2000 student to faculty ratio	16:1	13.12:1
Class Size 2-9 Students	61	92
Class Size 10-19 Students	193	130
Class Size 20-29 Students	184	73
Class Size 30-39 Students	66	62
Class Size 40-99 Students	13	20
Class Size 50-99 Students	1	6
Class Size 100+ Students	0	0
Total	518	383

Bachelor Degrees Conferred

Between July 1, 1999 and June 30, 2000

Discipline Area		
Area and ethnic studies		1.6%
Biological/life sciences	7.7%	13.4%
Business/marketing	32.8%	16.3%
Communications/communication technologies	0.5%	2.0%
Education		12.1%
English	4.9%	6.5%
Foreign languages and literature	0.3%	3.3%
Health professions and related sciences	0.8%	
Interdisciplinary studies		0.2%
Liberal art/general studies	11.9%	1.6%
Mathematics	1.0%	0.7%
Natural resources/environmental science		1.8%
Philosophy, religion, theology	0.3%	1.3%
Physical sciences	1.3%	2.2%
Psychology	13.9%	7.6%
Social sciences and history	13.7%	21.4%
Visual and performing arts	8.3%	5.6%

Student Sample Background Comparison by Institution

	FDU (<i>N</i> = 59)	OWU (<i>N</i> = 54)
Gender		
Male	33.9%	42.6%
Female	66.1%	57.4%
Age Range	19 – 23	19 – 23
Mean Age	20.36	20.24
Ethnicity		
Asian or Pacific Islander	3.4%	9.4%
Black, non-Hispanic	1.7%	3.8%
Hispanic	8.5%	0%
White, non-Hispanic	84.7%	79.2%
Other	1.7%	7.5
High School GPA		
3.51 to 4.00	34.5%	58.5%
3.01 to 3.50	43.1%	22.6%
2.51 to 3.00	20.7%	13.2%
2.01 to 2.50	1.7%	1.9%
1.51 to 2.00	0%	1.9%
≤ 1.50	0%	1.9%
College GPA		
3.51 to 4.00	32.2%	15.1%
3.01 to 3.50	40.7%	32.1%
2.51 to 3.00	23.7%	37.7%
2.01 to 2.50	3.4%	15.1%
1.51 to 2.00	0%	0%
College Aptitude Test		
SAT ≥ 1000 or ACT ≥ 23	75.4%	77.4%
SAT ≤ 990 or ACT ≤ 22	24.6%	22.6%
Academic Major		
Social-Behavioral Science & Educ.	81.4%	63.3%
Humanities & Arts	11.9%	10.2%
Natural Sciences & Medicine	6.8%	24.5%
Other	0%	2.0%
Parent's Estimated Income		
≤ \$35,000	9.1%	18.8%
\$35,000 to 49,999	10.9%	8.3%
\$50,000 to 69,999	25.5%	27.1%
\$70,000 to 99,999	16.4 %	16.7%
\$100,000 to 150,000	27.3%	12.5%
≥ \$150,000	10.9%	16.7%
Parents Education (from Grade 1)		
Mean of Father's Education	14.88 Years	15.35 Years
Mean of Mother's Education	14.33 Years	14.96 Years