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West Virginia University

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The Pinnacle of Undergraduate Education:
How Do Capstone Courses Support the Development of Purpose and Integrity?

Kristi D. Wood-Turner

Dissertation submitted to the
College of Human Resources and Education
At West Virginia University
In partial fulfillment of the requirements
for the degree of

Doctor of Education
In
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reflection

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ABSTRACT

The Pinnacle of Undergraduate Education: How Do Capstone Courses Support the Development of Purpose and Integrity?

Kristi D. Wood-Turner

As early as the eighteenth century students have been expected to complete the undergraduate education with a capstone course. Students spend on average, four years discovering, learning, analyzing, studying, and developing into well-educated graduates. As educators, we design curriculum to impact students' academic development in subject matter, provide connection through disciplines, and ideally deliver significant undergraduate experience to our understanding of student development and retention has become a foremost focus for educators. The purpose of this study was to determine whether capstone courses support the development of purpose (Chickering & Reisser, 1993, pp. 209-234) and integrity (Chickering & Reisser, 1993, pp. 235-264) through curriculum development and pedagogy. This study provided the opportunity to look at reflection and service as teaching tools.

The mixed method study incorporated methodological triangulation involving the use of document review and review of survey data. West Virginia University faculty members were asked to identify specific goals and outcomes of their capstone course thru an online survey. Additionally, each faculty member was asked to submit a syllabus for their course. The learning outcomes and activities were further analyzed. Results from the study show that although some skills from both purpose and integrity are being supported in these courses, there is a need to enhance the proficiency of specific activities and pedagogies in the classroom to more fully promote both purpose and integrity. Additionally, the results supported the argument that civic engagement and reflection play major roles in student learning and in turn the development of purpose and integrity.

The outcomes of this study will assist in the development of curriculum across disciplines. Understanding the impact of specific pedagogies on the development of purpose and integrity will allow faculty to take a closer look at the specific needs of their students. Also, the awareness of the use of specific learning outcomes will well thought out course activities assist with the effectiveness of meeting department, college and university strategic goals.

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Chapter One

Introduction and Statement of Problem

Problem Statement

Students spend on average, four years discovering, learning, analyzing, studying, and developing into well-educated graduates. As educators, we design curriculum to impact students' academic development in subject matter, provide connection through disciplines, and ideally deliver significant undergraduate experience to our understanding of student development and retention has become a foremost focus for educators. In recent years, attention toward the students' experiences has become prevalent. Whether it is at the start of the college experience or the end of the journey, the emphasis on student development has provided a foundation for program design. Programs such as the First Year Experience (FYE) have opened the door to exploration and research of the subsequent academic years. At the start of the undergraduate career, students experience a cornerstone to their education described as orientation to college, commonly known as Orientation 101 or University 101. Ultimately, seniors complete this undergraduate experience through the senior seminar or capstone course. The capstone design is varied throughout colleges and majors. Often, civic engagement and service learning components are integrated into the capstone courses. For the purpose of this research study, we will be using the term capstone course, as the description of a senior-level course students must take prior to graduating from a particular major. "The capstone course typically is defined as a crowning course or experience coming at the end of a sequence of courses with the specific objective of integrating a body of relatively fragmented knowledge into a unified whole" (Durel, 1993, pp. 223-225).

The earliest capstones can be traced to the end of the eighteenth century when college presidents taught courses generally integrating philosophy and religion (Henscheid, 2000). As times have changed, so have the intentions and development of curricula. This is evident by the increased focus on the freshman and senior year experience.

The emergence of student development theories related to the overall development of the whole student began late in the nineteenth century as what is now known as student affairs. One major contribution to the defining of student development is the Seven Vectors of Development by Arthur Chickering. Chickering proposed seven vectors of development that contribute to the formation of identity (Evans, Forney, Guido-DiBrito, 1998, pp. 38-39). Although students move through each vector at different rates, students often overlap in development. The seven vectors: developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity, all have a large influence on student retention. In particular, for this study, the vectors of purpose and integrity will be applied to student learning. Purpose and Integrity are interrelated and provide direction for the student in terms of life goals. Understanding the impact on these two vectors will allow educators to create learning outcomes that provide the deepest meaning for college seniors. Developing purpose “entails an increasing ability to be intentional, to assess interests and options, to clarify goals, to make plans, and to persist despite obstacles” (Chickering & Reisser, 1993, p. 209). Identifying expectations and interests in terms of personal and professional development that reach further than goals is a focus in this vector. As a student experiences the *development of purpose*, values and goals begin to hold more meaning and develop into a connection between student perceptions and realities. “*Development of integrity* is closely related to establishing identity and clarifying

purposes” (Chickering & Reisser, 1993, p. 235). Reflection of values and constant reassessment of actions is a key component of the *development of integrity*. Understanding of the environment’s connection to community requires that a student has gone through a process of analyzing and discovering boundaries and limitations. Another aspect of this vector is the ability to explore the depth of diversity and culture with openness and breadth. As an area focused on the development of students’ social and emotional well being, student affairs began to make the connection to the stages of the described vectors. As student development became central to higher education, educators integrated developmental theories into the learning outcomes of academic course work and eventually in capstone courses.

The introduction of life skills and career preparedness has transitioned the senior year into a time where student development milestones integrate with academic reflection. In order to begin to understand the developmental transformation of students in the final stages of the undergraduate career, a thorough investigation of the capstone experience is necessary.

In 2003, the Graduate School of Education [Portland University] conducted a post-capstone student survey (Cress & Brubaker, 2003, pp. 123-128). The data for the four year study was consistent and represented “significant educational gains” from the experience of community-based learning in the capstone. Community-based learning is a component of a larger theme of civic engagement. Civic engagement is defined by the American Psychological Association (APA) as “individual and collective actions designed to identify and address issues of public concern” (www.apa.org, 2010). As early as 1954, W. Hugh Stickler’s article Senior Courses in General Education provided a definition of senior capstone courses which included modern day community-based learning. In this early article, Stickler (1954) noted that the “purposes of the course remained the same: to integrate the materials of the student’s college

work, to acquaint the student somewhat with the frontier problems of modern interest, and to help him find an adequate relationship with the world in a modern Weltanschauung [German, from Welt world + Anschauung view]" (p. 38). Civic engagement such as service learning, community service, internship work, and activism provides opportunities for growth and democracy. Civic engagement provides students with the potential growth of civic responsibility and gives the world view faculty were striving for in the 1950's. Linking student development and academic development are natural characteristics of the service learning pedagogy.

Because there are many definitions of service learning, this study will be using a definition provided by the National Service Learning Clearinghouse. Service learning is defined in this study as "a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities" (www.servicelearning.com, 2008). Internships in a capstone course are considered a placement in a professional environment with the intention that the student will be able to show mastery of the subject matter while applying major concepts. Immersion allows the students be "provided direct, unadulterated exposure to the exigencies of a particular context" (Pompa, 2002, pp.2-4). "One of the hopes of a community-based learning experience, such as the capstone course, is that by moving a student's learning experience from the classroom into the 'real world,' some kind of transformation of the student will occur" (Collier, 2000, pp. 285-299). Designing courses and programs central to civic engagement can provide "activities to create space for constant reflection about how such experiences might shape their [the students] future careers and life work" (Sandmann & Weerts, 2006). Prior research takes into account the impacts of capstone courses on student identity, as well as, the connection of capstones to general education. Prior research has not explicitly examined the *development of purpose* and

integrity in the relation to capstone courses. Another missing connection is the relationship between classroom pedagogy and the affect on student development. This study will explore different pedagogies targeted to capstone courses at the senior level and the impact of civic engagement on specific developmental stages.

Capstone courses have separated into many forms and distinctions throughout the years. Henscheid and Barnicoat (2001) elaborate on the classifications in *Capstone Courses in Higher Education* and describe five different models: (1) Department or discipline based courses, (2) Interdisciplinary courses, (3) Transition courses, (4) Career-planning courses, and (5) Other (Henscheid & Barnicoat, 2001). Department or discipline based courses seek to summarize learning within the academic major. This course is often offered at the conclusion of the students' academic career. One of the techniques in these courses would be the use of group projects or presentations to show student learning. Interdisciplinary courses, although smaller in percentage of senior seminars and capstones, offer students an opportunity to synthesize general education, major classes, and cocurricular learning (para. 8). Project topics in this type of capstone are broad and generally include topics such as ethics and bias. Transition courses are commonly used to support the move from undergraduate to either the work force or graduate school. It is likely that students will build portfolios or spend time with a career center in this course. Career-planning courses, similar to transition courses, use this time for student professional development. By covering topics like current trends in the field and procedures for licensure and job seeking, students develop a portfolio that will assist them in becoming a professional after graduation. A small section of capstones do not fall under any of the other four types of capstone. Having a goal of promoting institutional goals as opposed to integrating major or general education topics, these courses are typically small and faculty lead.

Purpose statement and significance of study. The purpose of this study was to determine whether capstone courses support the development of purpose (Chickering & Reisser, 1993, pp. 209-234) and integrity (Chickering & Reisser, 1993, pp. 235-264) through curriculum development and pedagogy. This study provided the opportunity to look at reflection and service as teaching tools. Understanding the pedagogies that enhance purpose and integrity can assist faculty in development of capstone courses that will more fully meet the needs and requirements of the higher education institution. Potentially, the information can be applied to a cornerstone course or program such as First Year Experience to enhance the overall undergraduate experience.

Research Questions

1. What cognitive levels do faculty emphasize in capstone courses as articulated by their student learning outcomes?
 - a. How often do the themes of student learning outcomes in capstone course relate to the *development of purpose*?
 - b. How often do the themes of student learning outcomes in capstone course relate to the *development of integrity*?
2. To what extent does each of the different capstone models emphasize the *development of purpose* or integrity?
 - a. To what extent do capstone instructors use activities (both in and out of the class) that support the *development of purpose*?
 - b. To what extent do capstone instructors use activities (both in and out of the class) that support the *development of integrity*?
3. To what extent do capstone instructors utilize civic engagement pedagogy in capstone courses?
 - a. Do courses with civic engagement pedagogy enhance the *development of purpose*?
 - b. Do courses with civic engagement pedagogy enhance the *development of integrity*?

4. To what extent do capstone instructors utilize reflection in capstone courses?
 - a. Do courses that promote reflection enhance the *development of purpose*?
 - b. Do courses that promote reflection enhance the *development of integrity*?

At first, the researcher reviewed literature in the areas of capstone course models, curriculum design, civic engagement pedagogy, and Chickering and Reisser's (1993) framework including the vectors of purpose and integrity. In Chapter Three, the research methods are presented including the sample data, collection methods and information about how the data were analyzed. Also, a collection of syllabi from the capstone areas are compared in with a focus on intended learning outcomes. Models of capstone courses, currently being used at West Virginia University, are compared and contrasted with each other in order to describe the developmental effects of the capstone pedagogy. All of these are learning experiences completed in the senior year and are culminating capstones for the students in the discipline.

Chapter Two

Review of Literature

The intent of this literature review is to provide an understanding of how capstone courses impact student development and the framework that will allow faculty to provide pedagogy that enhances student learning outcomes. The focus will be on the development of college seniors, specifically addressing the increase of purpose and integrity (drawn from Chickering & Reisser's 1993 framework) during a college capstone course. The literature review will explore the emergence of the senior year experience and college capstone courses, explaining their role in higher education. Understanding curriculum development and defining student learning outcomes will assist in understanding developmental goals. The review will then introduce civic engagement pedagogy used in curriculum to provide a broader understanding of course delivery. Reflection will be discussed as a means of understanding student learning in the classroom curriculum. In conclusion, the review will offer student learning outcome assessments that assist in targeted curriculum development.

Chickering's Seven Vectors

College student development is an extensive discipline with many different frameworks and theories to describe the experience of students throughout their journey in higher education. Theories on the study of student development provide the opportunity for educators to have an innovative lens to view student success in the undergraduate curriculum. The number of student development theories has increased significantly since 1965 (Terenzini, 1994, pp. 422-427). Specifically, the psychosocial theory developed by Chickering has emerged as a leading framework for understanding "how people thought about themselves and the world but also in how they felt, behaved, and interpreted the meaning of experience" (Chickering & Reisser, 1993,

p. 21). In his theory of psychosocial development, Arthur Chickering (1969) provided an overview of the developmental issues faced by college students and went on to examine environmental conditions that influence development (Evans, Forney, Guido-DiBrito, 1998, p. 36). Following the footsteps of Erik Erikson, Chickering expanded the ideas of development past childhood and the influence of the environment on identity. Student identity and the environment became areas that Chickering saw as substantially impacting the development of college age students.

Chickering proposed seven vectors of development that contributed to the formation of identity (Evans, Forney, Guido-DiBrito, 1998, p. 37). The “original seven vectors were (1) developing competence, (2) managing emotions, (3) developing autonomy, (4) establishing identity, (5) freeing interpersonal relationships, (6) developing purpose, and (7) developing integrity” (Chickering & Reisser, 1993, p 22-23). Although the original theory was developed in 1969, the vectors have been studied and revised to fit the changing developmental understanding of college students.

Chickering and Reisser (1993) redefined and reordered some of the vectors to provide a more accurate picture of college student development. Although they stop short of calling their vectors hierarchical, Chickering and Reisser are clear to call them steps, and are careful to place them in a particular order in their theory (Foubert et. al., 2005).

In this revision, the vectors are fully defined below.

1. Developing competence. Three kinds of competence develop in college – intellectual competence, physical and manual skills, and interpersonal competence. It also entails developing new frames of reference that integrate more points of view and serve as “more adequate” structures for making sense

out of our observations and experiences. Physical and manual competence can involve athletic and artistic achievement, designing and making tangible products and gaining strength, fitness, and self-discipline. Interpersonal competence entails not only the skills of listening, cooperating, and communicating effectively, but also the more complex abilities to tune in to another person and respond appropriately, to align personal agendas with goals of the group, and to choose from a variety of strategies to help a relationship flourish or a group function.

2. **Managing emotions.** Anxiety, anger, depression, desire, guilt, and shame have the power to derail the educational process when they become excessive or overwhelming. Like unruly employees, these emotions need good management. Development proceeds when students learn appropriate channels for releasing irritations before they explode, dealing with fears before they immobilize, and healing emotional wounds before they infect other relationships.
3. **Moving through autonomy toward interdependence.** A key developmental step for students is learning to function with relative self-sufficiency, to take responsibility for pursuing self-chosen goals, and to be less bound by others' opinions. Emotional independence means freedom from continual and pressing needs for reassurance, affection, or approval. Instrumental independence has two major components: the ability to organize activities and to solve problems in a self-directed way, and the ability to be mobile. Developing autonomy culminates in the recognition that one cannot operate in

a vacuum and that greater autonomy enables healthier forms of interdependence.

4. Developing mature interpersonal relationships. Developing mature relationships involves (1) tolerance and appreciation of differences (2) capacity for intimacy. Development means more in-depth sharing and less clinging, more acceptance of flaws and appreciation of assets, more selectivity in choosing nurturing relationships, and more long-lasting relationships that endure through crises, distance, and separation.
5. Establishing identity. Development of identity involves: (1) comfort with body and appearance, (2) comfort with gender and sexual orientation, (3) sense of self in a social, historical, and cultural context, (4) clarification of self-concept through roles and life-style, (5) sense of self in response to feedback from valued others, (6) self-acceptance and self-esteem, and (7) personal stability and integration.
6. Developing purpose. Developing purpose entails an increasing ability to be intentional, to assess interests and options, to clarify goals, to make plans, and to persist despite obstacles. It requires formulating plans for action and a set of priorities that integrate three major elements: (1) vocational plans and aspirations, (2) personal interests, and (3) interpersonal and family commitments. It also involves a growing ability to unify one's many different goals within the scope of a larger, more meaningful purpose, and to exercise intentionality on a daily basis.

7. Developing integrity. Developing integrity involves three sequential but overlapping stages: (1) humanizing values – shifting away from automatic application of uncompromising beliefs and using principled thinking in balancing one’s own self-interest with the interests of one’s fellow human beings, (2) personalizing values – consciously affirming core values and beliefs while respecting other points of view, and (3) developing congruence – matching personal values with socially responsible behavior.

This brief overview of the seven vectors provides a general understanding of the details in each vector. For this study, the focus will be on vectors 6 and 7. Focusing on the *development of purpose* and integrity will provide a foundation to build interpersonal skills in students participating in capstone courses.

Often objectives of individual higher education institutions lend themselves toward specific vectors. For one college competence is most important, for another integrity, for a third autonomy and purpose....their clarity and internal consistency with which they are implemented largely determine whether any substantial development will occur or whether the student, subject to opposing forces, remains fixed or changes only in response to other external pressures (Chickering & Reisser, 1993, pp. 268-269). The seven vectors have been applied to areas of student development in recent years. One of the tools used to measure development along some of these vectors is the Student Development Task and Lifestyle Inventory (SDTLI) (Winston, Miller, & Prince, 1987, p. 63). In 2000, a longitudinal study validated the assumption that developing purpose and competence are influenced by college experiences (Martin, 2000). Foubert, Nixon, Sisson, and Barnes (2005) conducted a longitudinal study of Chickering and Reisser’s vectors in 2005 focusing on gender differences and implications for refining the theory.

This four-year study provided an understanding of the students' movement through three of the seven vectors, developing purpose, developing mature interpersonal relationships, and moving thorough autonomy toward interdependence. This research also indicated that all the vectors, excluding autonomy, are developed after students first year of college. Although the movement through these vectors happens in a fluid manner, research has shown that it is the student experiences that provide motive for the movement. Based on the findings of the previous study, the vectors of purpose and integrity are not necessarily the final stages in the developmental process. Discovering the motive for the movement into and through the vectors will provide higher education administrators and faculty a foundation for curricular enhancements earlier in the students' college career as the transition is made into the college years.

Senior Year Experience

Student satisfaction and retention are closely related to college impact and institutional accountability and the data show that student satisfaction with the college experience has remained generally high over time, with only small changes in specific areas of satisfaction (Dey & Hurtado, 2005, p. 334). The recent movement of student affairs to focus on each academic year as its own area of retention has provided opportunities to enhance the movement to the student-centered paradigm. Closing the gap between theory and practice in undergraduate education is essential to ensuring the well being of individuals and the future of our society (Koljatic & Kuh, 2001, pp. 351-371). As noted by Gardner & Van der Veer & Associates (1998), in their book *The Senior Year Experience: Facilitating Integration, Reflection, Closure, and Transition*, although there appears to be a general acceptance of the need for specific intervention to help students successfully transition into the college environment, the problems and needs associated with the transition out of the college setting have received little similar

attention from college and university personnel, let alone researchers (p.127). The senior population provides researchers the opportunity to review the final stages of the college career applicable to students that have to this point been retained. Understanding the areas of concern for senior students has been a topic of growing interest in terms of assessing the mission of the major, department and university.

To comprehensively address these concerns, the Senior Year Experience movement emerged as a way to focus on “the total experience of seniors inside and outside the classroom, as provided by the faculty, student affairs officers, academic administrators, and seniors themselves” (Gardner, 1998, preface xii).

Capstone Courses

Connecting the emerging push toward assessment with the existing concentration on student learning, college capstones provide a format to begin to understand the movements from teacher-centered to learner-centered paradigms. “The capstone course provides majors with a structured opportunity to address and assess their experiences” (Wagenaar, 1993, p.214). In order to better synthesize themes of general education, Gardner (1999) suggested possible goals for capstone transition seminars:

1. Study transition in the senior year experience.
2. Prepare students for transition during the senior year.
3. Have students engage in analysis, self-assessment, and reflection about the meaning of their total undergraduate experience.
4. Have students demonstrate what they have learned from their liberal arts and general education courses and demonstrate the interrelationship between at least two disciplines.

5. Have students demonstrate what they have learned in a career planning process that will be provided in this course.
6. Have students prepare a portfolio to document and portray what they have learned and how they have developed in college, academically and personally.
7. Allow students to participate in an academic support group of fellow students in which they receive instruction, support, and feedback from their instructors and classmates and in which they provide the same to them.
8. Encourage students to consider holistically a variety of issues to be faced in process of learning college. These issues will be in the following possible dimensions: personal, social, vocational, spiritual, political, civic, financial, practical, philosophical, psychological, and physical (pp. 223-224).

A more holistic approach is considered to be the primary direction of what is known in this research as the senior capstone course. “Based upon the recommendations of The Carnegie Foundation, a portfolio and a senior thesis are suggested as the key instruments to measure achievement of outcomes at the capstone level” (Moore, 2005, p. 7). Research studies have often been directed toward specific capstone courses and have little indication of a broad application to the general capstone pedagogy.

Historically, the senior course has evolved as a vital part of the college curriculum. As early as 1947, senior courses have been provided to give students a common experience prior to leaving the higher education institution. In the early 1950’s W. Hugh Stickler (1954) recognized that college and university curricula fragmented and in need of senior courses. “The first study conducted in the early 1970’s and sponsored by the Carnegie Council on Policy Studies in Higher Education found that “only 3 percent of participating institutions sponsored senior

seminars” (Henscheid, 2000, p.2). In the 1990’s Joseph Cuseo authored the second study of the senior year experience focusing on the types, goals, and forms of senior seminars. A review of senior seminars and capstone courses was conducted by Jean Henscheid in August of 2000. The review suggested that these courses are most often associated with a specific academic discipline and coordinated through an academic department or unit (Capstone Courses in Higher Education). Later that year the National Resource Center for the First-Year Experience and Students in Transition at the University of South Carolina reported study results about student perceptions of capstone learning. The overall theme of the previous research is the identified need for a capstone experience, however, the specific design of the course and consensus of student learning needs continues to be studied.

Moore (2005) did note some potential limitations to the capstone course that should be understood by faculty and departments:

1. Subjective evaluations resulting from nonspecific expectations.
2. Too much flexibility for less motivated and goal oriented students.
3. Too unfocused.
4. Requires faculty to abandon specialized agenda.
5. Great demand on student time, learning, and performance.
6. Does not adequately assist average or below average students. (p. 22)

In the early twenty-first century senior seminars and capstone courses in higher education generally fall into one of five types. This research examines these five types of capstone pedagogy as seen in Table 1, to explore the impact on purpose and integrity. Henscheid & Barnicot (2001) describe these types as follows:

1. Department or discipline based courses. The overriding goal of department or discipline based courses is to summarize learning within the academic major. These types of classes are also likely to make connections between the academic learning and the professional world. Some institutions use these courses as a means to encourage seniors to pursue postgraduate study. This subset of courses makes up the majority of the capstone courses offered. These courses are typically offered through the academic department and may be required for graduation. Faculty members within the academic discipline typically teach these courses at the conclusion of the students' academic careers. The classes are taught by a single faculty member or team-taught by faculty members or staff; three hours of semester credit are normally offered for a letter grade.
2. Interdisciplinary courses. Interdisciplinary courses, representing a smaller percentage of senior seminars and capstones, offer students an opportunity to synthesize general education, major classes, and co-curricular learning. These courses are more likely to be found at private institutions, taught by a single faculty member. Letter grades are prevalent, and students receive three to four semester hours of credit for completing these courses. Credit for interdisciplinary senior seminars and capstone courses is applied most often as a major requirement, core requirement, or a general education requirement. Presentations and major projects are most often employed as instructional components in these courses. Topics are broad, often involving philosophical issues such as ethics. These courses tend to stress the inter-relatedness of different academic majors and their role within society.
3. Transition courses. Transition courses, the third most prevalent type of senior seminars and capstones, focus on preparation for work, graduate school, and life after college.

Faculty or career-center professionals most often teach these courses, which typically award a letter grade, although they are less likely to do so than department or discipline based courses and interdisciplinary courses. These classes generally earn the participating students one semester of credit.

Topics for transition courses mainly consist of students' transition issues, and students enrolled in them are likely to engage in job search and life transition planning.

Discussions center around self-assessment, financial planning, the job search and the first year on the job, relationships, and diversity. Presentations weigh heavily in evaluation of performance in these courses, but rather than major projects, students often develop a portfolio or use the career center.

4. Career-planning courses. Career-planning courses assist students as they engage in pre-professional development. In some cases career planning is the only goal of these courses. In the 1999 First National Survey of Senior Seminars and Capstone Courses, these courses were the least frequently reported major type. Career-planning courses are likely to be taught by career-center professionals, but in some cases academic faculty might teach them. Although students typically receive grades for these courses, they are less likely to receive as many credit hours as students enrolled in other types of senior seminars or capstone courses. The classroom experience in these courses is evaluated most often by the creation of a portfolio, followed by a major project and a presentation. Classroom topics for career-planning courses include current trends in the field, procedures for licensure and job seeking, students' roles in the workplace, and development of a résumé, cover letter, and portfolio.

5. Other. There are also a small number of senior seminars and capstone courses that do not fit in these four types. These courses often span curricular and cocurricular boundaries and attempt to address institutional goals. These courses do share many of the characteristics of other courses. The primary goals (fostering integration and synthesis within the academic major and promoting integration and connections between the academic major and world of work) are similar to those of most types of the other senior courses. These courses do not generally focus on general education, and are almost always taught by a member of the academic faculty. They tend to be the smallest of the senior courses, often enrolling fewer than nine students. They are most often held for one academic term and students are usually assigned a letter grade (para. 7-11).

The inclusion of the “other” description allows for the study of specifically designed service-learning and immersion courses. This will also open up the opportunity for faculty to self-identify the pedagogy of their course.

Table 1.

Capstone Model and Activities

Capstone model	Purpose	Instructional activities
Department or discipline based	Summarize learning within the academic major	Group projects or presentations
Interdisciplinary	Synthesize general education and major classes	Broad project topics and often includes ethics and bias
Transition	Support the move from undergraduate to either the work force or graduate school	Developing resumes or building portfolios, self-assessment and financial planning
Career planning	Covering trends in field and procedures for licensure and job seeking	Building portfolios, often taught by career-center professionals
Other	Fostering integration and synthesis with broader boundaries that do not fit with any other model	Always taught by academic faculty with smallest course size

Source: Henschied & Barnicot, 2002

Curriculum development. “The departmental and institutional mission statements, incorporating various elements and the spirit of the Carnegie report and others, provide a basis for the direction and development of curriculum at the institutional and departmental level”

(Moore, 2005, p. 7). In order to fully understand the importance of curriculum development, it is first important to define the often ambiguous term, curriculum. According to Stark and Lattuca (1997) in the book, *Shaping the College Curriculum*, at a superficial level, the public assumes it knows how college curriculum is defined. In Lattuca and Stark's view (2009), an academic plan should involve decisions about (at least) the following elements:

1. PURPOSES: knowledge, skills, and attitudes to be learned;
2. CONTENT: subject matter selected to convey specific knowledge, skills and attitudes;
3. SEQUENCE: an arrangement of the subject matter and experiences intended to lead to specific outcomes for learners;
4. LEARNERS: how the plan will address a specific group of learners;
5. INSTRUCTIONAL PROCESSES: the instructional activities by which learning may be achieved;
6. INSTRUCTIONAL RESOURCES: the materials and settings to be used in the learning process;
7. EVALUATION: the strategies used to determine whether decisions about the elements of the academic plan are optimal; and
8. ADJUSTMENT: enhancements to the plan based on experience and evaluation. (pp. 4-5)

Throughout the history of the development of curriculum there have been five reoccurring debates about the social influences on higher education: purpose, learners, context, instructional and evaluation (Lattuca & Stark, 2009, p. 25). In short, purpose centers on whether undergraduate education should be general or vocationally oriented, the debate on learners looks into elitism, access and ever-changing pools of students, context debates focus on the prescriptive nature of curriculum, institutional process debates look at teaching methods and

curricular arrangements at the course, program, and college level, and finally evaluation debates call for greater accountability and have include arguments over the rate of change (Lattuca & Stark, 2009, p.26). As we move through the aforementioned debates, higher education institutions are beginning to take a more holistic look at student development.

The capstone course is designed as a final review of a major or discipline for a college or university. Understanding the ways and means to which students receive capstone instruction provide details that expand debate areas. Lattuca and Stark (2009, p. 201) also noted that faculty usually have well-developed knowledge structure for the discipline they teach. However, the movement toward civic engagement pedagogies has been met with some hesitancy. More knowledge and understanding of civic literacy is needed. National organizations have recently been formed, including the Campaign for the Civic Mission of Schools, the Carnegie Foundation for the Advancement of Teaching's Political Engagement Project, and Campus Compact and its Research University Civic Engagement Network (Lazere, 2010).

Civic Engagement Pedagogy

Higher education is being called on to renew its historical commitment to its public purposes (Jacoby, 2009, p. 1). Through this calling, institutions of higher education have developed areas of engagement in varying forms. In Adams-Gaston, Jacoby and Peres conference presentation *Creating an Institutional Culture to Advance Civic Engagement and Leadership* (as cited in Jacoby, 2009), civic engagement involves one or more of the following:

1. Learning from others, self, and environment to develop informed perspectives on social issues;
2. Valuing diversity and building bridges across difference;
3. Behaving, and working through controversy, with civility;
4. Taking an active role in the political process;

5. Participating actively in public life, public problem solving, and community service;
6. Assuming leadership and membership roles in organizations;
7. Developing empathy, ethics, values, and sense of social responsibility; and
8. Promoting social justice locally and globally. (p.9)

Specifically, civic engagement in the classroom provides essential learning elements. These elements are described in the model The Civic Learning Spiral as shown in Table 2. Jacoby discusses this model in her book *Civic Engagement in Higher Education* (2009) in detail. In summary, the Civic Engagement Working Group, a creation of the Greater Expectations: Goals for Learning as a Nation Goes to College study (Jacoby, 2009, p. 59), developed a model for civic learning that could be applied from elementary school through college and, in the process, establish the habit of lifelong engagement as an empowered, informed and socially responsible citizen (p. 59).

Table 2

The Civic Learning Spiral

1. Self
 2. Communities and cultures
 3. Knowledge
 4. Skills
 5. Values
 6. Public action (pp. 59-60)
-

Jacoby provides outcomes for each of the six braids in The Civic Learning Spiral. The braids discussed by Jacoby match directly to the six essential learning elements:

1. Self: focuses on relationships, identity, agency, disposition toward action, and commitment.

2. Communities and cultures: considers appreciation of diversity and alternative sources of wisdom; encourages curiosity, transgressing boundaries, and exploring comparative civic traditions.
3. Knowledge: includes deliberations on the implications of power, social movements, democracy, social construction, and civic intellectual debates.
4. Skills: includes critical thinking, conflict resolution, communication, deliberation, community building, and civic imagination.
5. Values: focuses on the relation of personal to public good, equality, opportunity, liberty, justice, and character.
6. Public action: explores democratic governance, communal living, public participation, strategic thinking and action, risk taking, and raising ethical questions (Musil et al., in press).

Spiezio, Baker, and Boland noted in their 2005 research study titled “General Education and Civic Engagement: An empirical analysis of pedagogical possibilities” that “educators can make a decisive contribution to the fight against student apathy if they are willing to embrace instructional practices that explicitly emphasize the significance of civic engagement” (p. 290). The major findings of the study suggest that pedagogies of engagement promote the following changes in regard to student attitudes:

1. an increase in the value and significance that students attach to the principle of civic engagement;
2. a change in the way that students relate to, and interact with, other members of the community;
3. an increase in the degree of confidence that students express in regard to their critical thinking skills; and
4. an increase in the sense of efficacy that students express in regard to their ability to serve as agents of social and political change (p. 290).

In addition to the developmental changes that are proven in students who participate in civic engagement pedagogies, there are also impacts on areas such as career choice, academics and

leadership. These findings from Vogelgesang and Astin's study (2000) on the effects of community service and service learning support the potential to see growth in the areas of student purpose and integrity (drawn from Chickering and Risser's 1993 framework).

Service learning pedagogy. Recognition of the faculty role in sustaining campus-based service first became widespread in the early 1990s, thanks largely to a report (1990) prepared for Campus Compact by Tim Stanton, then associate director of the Haas Center at Stanford University (Zlotkowski, 1994, p.3). As a result of Stanton's report, the Ford Foundation backed a multi-year initiative that was entitled "Integrating Service with Academic Study." The study leads to increased attention and focus on service learning as a method of instruction for faculty. Many postsecondary educators have unitized service learning as part of their curriculum and co-curriculum (Armstrong, 2007, p. 1). Key to the movement toward pedagogy and away from the more prominent custom of "using the community for the academy's own ends" (Zlotkowski, 1994, p. 3), service learning not only allows for the faculty to be in a relationship of reciprocity with the community in which they teach, but also gives the students the opportunity to learn in a new way more applicable to some types of learners. If service learning is about voluntary service, then it does not belong in the curriculum, and may, when mandatory, even violate the constitution. However, if service learning is about learning, than it needs to be directly folded into curricula, it can be made mandatory (Barber, 1997, p 228). "Regardless of the care and skill with which a faculty member designs the community service activities in a course, that design cannot fully achieve its ends unless similar care and skill are expended to design exercises that allow students to turn those activities into conscious learning" (Zlotkowski, 1994, pp. 107-108).

Course activity development. For those charged with improving the quality of teaching and learning in universities, an abiding concern has been trying to persuade academics to shift

from teacher-centered forms of teaching towards more student-centered approaches (Kember, 2008, p. 1). As the paradigm shifts, the activities that are presented to students in order to reach the learning goals of the course also shift. For example, a lecture only course may now focus on activities that engage students in hands-on learning. Faculty have a large pool of options when it comes to choosing activities for course lessons. Students who expend more effort in a variety of activities benefit the most intellectually and in the personal development domain (Astin, 1993; Chickering, & Reisser, 1993; Pascarella, & Terenzini, 1991).

Each activity is a means to assessing the learning outcomes for the course. It is critical that faculty understand the impact of learning styles on the students' ability to synthesize learning and application. For example, although hands-on research projects may enhance students' knowledge and their skill base, such experiences might be difficult for students who are unprepared to undertake this work on their own (Walker, 1996, p. 327).

Reflection. Service learning is a specific pedagogy that incorporates reflection into the core construction. Reflection gives instructors a tool to strengthen learning goals and outcomes. Mezirow (1990, 1991) distinguishes three kinds of reflections that are labeled content reflection, process reflection and premise reflection. "We may reflect on the content or description of a problem . . . , the process or method of our problem solving, or the premise(s) upon which the problem is predicated" (Mezirow 1991, p. 117, italics in original). The three kinds of reflections presented by Mezirow (1991) are as follows:

1. Content reflection – (What do I know?) reflection on a problem, or defining and describing a problem, without questioning the presuppositions upon which the problem definition or description is based.

2. Process reflection – (How do I know if it works?) reflection on effectiveness of problem or solution.
3. Premise reflection – (Why does it matter?) reflection on questioning the presuppositions underlying our knowledge (p. 107).

In further discussing the difference between these three kinds of reflection, Mezirow (1991) contends:

The critique of premises or presuppositions pertains to problem posing as distinct from problem solving. Problem posing involves making a taken-for-granted situation problematic, raising questions regarding its validity ... the term "critical reflection" often has been used as a synonym for reflection on premises as distinct from reflection on assumptions pertaining to the content or process of problem solving. (p. 105)

As noted by Rogers (2001) although the concept of reflection lacks definitional clarity, significant commonalities are evident among the theoretical approaches (p. 49). Often times faculty and instructors interchange words like introspection (Sherman, 1994) and meditation (Holland, 2000). In addition to the confusion regarding terminology, there is a lack of clarity in the definition of reflection, its antecedent conditions, its processes, and its identified outcomes (Rogers, 2001, p. 38). Though reflection has become a buzzword in educational literature and among many is considered the panacea to good practice, what instructors are asked to reflect on is not always made clear (Kreber, 2005, p. 326). The apparent diversity of applications of the idea of reflection is really about how this relatively simple process is used and guided rather than about the process itself (Moon, 1999, p. 155).

This research will focus on the outcomes of the reflection process and how it relates to student development, specifically the *development of purpose* and integrity (drawn from

Chickering & Reisser's 1993 framework). The Model of Reflective Judgment emphasizes the thinker's epistemic assumptions-what can be known and how a person can know. In this vision of the higher order cognitive ability, the reflective thinker examines and evaluates the available relevant information and opinions to construct a plausible solution to a problem at hand (King & Kitchener, 1994, p. 18). According to the Learning Management Corporation ("Developing Outcomes and Objectives"), reflective thinking is what allows an individual to have some self-control and command over her own thinking and beliefs instead of their being entirely socially constructed. Evaluative methods are needed that will enable educators to assess the outcomes of the reflective process without minimizing its richness or complexity (Rogers, 2001, p.55).

Reflective practices that are intellectually credible can promote resiliency and resourcefulness in the face of life's dynamic challenges and encourage habits of individual and collective attention and analysis that can sustain higher education as it works to address the problems of society (Rogers, 2001, p. 55).

Student Learning Outcomes

The role of the capstone course is to draw all learning together and to provide a single opportunity or experience during which a student demonstrates that he or she has accomplished or achieved the university and department's educational goals as represented by the various courses taken and the appropriate mission statements (Moore, 2005, p. 3) There are multiple reasons for defining learning outcomes for programs and courses including:

1. it shows to students what competencies they are expected to develop during their studies;
2. it shows to future employers what they can expect when they employ a graduate;

3. it shows to teachers what competence development they have to facilitate in their curriculum;
4. it shows to faculties on which dimensions they can measure student achievements in their study programs;
5. it shows to accreditation institutions the focus of the HEI [Higher Education Institution]; 6) it shows to politicians the focus of the HE [Higher Education]-sector in general (Nygaard, Holtham, & Courtney, 2009, p. 18).

Lattuca and Stark (2009) note that some instructors may stress basic skills, some general learned abilities to be acquired in college, and some learning expected in particular academic fields (p. 244). Some examples from Lattuca and Stark's *Shaping the College Curriculum* suggest broad categories within the domain of academic achievement shown in Table 3. Student performance that meets the expectations of the outcomes shown in Table 3 vary based on discipline and instructional style.

Table 3

Examples of Course-Level Objectives

Basic Skills

1. Communication skills
2. Problem-solving skills
3. Numerical skills

Course Related Learning

1. Vocabulary
2. Facts
3. Principles
4. Concepts
5. Methods of inquiry
6. Methods of application
7. Professional and occupational skills

General Abilities and Attributes

1. Cognitive characteristics such as conceptual flexibility
2. Changes in orientation toward inquiry or toward course or program content
3. Evidence of independent thinking

Evidence of disposition toward continuing learning ^a

^aLattuca & Stark, 2009

Students' learning outcomes are influenced and sometimes determined by learning environments (Deem & Brehony, 2000, p. 163). The focus of higher education is not on what teachers teach but rather on what students learn; higher education institutions face a range of challenges. The focus must affect the interaction between teachers and students because it will vary all the way down from an institutional level to the activities going on in the classroom (Nygaard, Holtham, & Courtney, 2009, p. 23).

Bloom's Taxonomy. Understanding the cognitive level of student learning outcomes can assist faculty in identifying the thinking skills that are appropriate for college students to achieve through the curriculum. Benjamin S. Bloom "initiated the idea, hoping that it would

reduce the labor of preparing annual comprehensive examinations”(Krathwohl, 2002, p. 1). The concept of the taxonomy was developed originally to become a constant measurement between faculty in different colleges and universities in order to create banks of items. Bloom saw the original taxonomy as more than a measurement tool. As Krathwohl (2002) noted, he believed it could serve as:

1. Common language about learning goals to facilitate communication across persons, subject matter, and grade levels;
2. Basis for determining for a particular course or curriculum the specific meaning of broad education goals, such as those found in the currently prevalent national, state and local standards;
3. Means for determining the congruence of educational objectives, activities, and assessments in a unit, course, or curriculum; and
4. Panorama of the range of educational possibilities against which the limited breadth and depth of any particular educational course or curriculum could be contrasted” (p. 1).

The original taxonomy consisted of Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. These original concepts were listed from least complex to most complex.

“Merl Wittrock, a cognitive psychologist who had proposed a generative model of learning, was an essential member of the group that over a period of five years revised the Taxonomy of Educational Objectives, originally published in 1956” (Krathwohl & Anderson, 2010, p. 1).

“Unlike the original Taxonomy that was unidimensional, [our] early discussions, coupled with a review of alternative classification systems, suggested that the revision should contain two dimensions: knowledge and cognitive processes”(Krathwohl & Anderson, 2010, p 1). Bloom's

Taxonomy has been condensed, expanded, and reinterpreted in a variety of ways (Forehand, 2005). The original and new versions of the Taxonomy are listed in Table 3.

Table 4

Bloom's Taxonomy Original and New

Old Version	New Version
Evaluation	Creating
Synthesis	Evaluating
Analysis	Analyzing
Application	Applying
Comprehension	Understanding
Knowledge	Remembering

Anderson & Krathwohl, 2001

The new terms are defined as:

1. Remembering: Retrieving, recognizing, and recalling relevant knowledge from long-term memory.
2. Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
3. Applying: Carrying out or using a procedure through executing, or implementing.

4. Analyzing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.
5. Evaluating: Making judgments based on criteria and standards through checking and critiquing.
6. Creating: Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing.
(Anderson & Krathwohl, 2001, pp. 67-68)

Assessment of student needs and intended learning outcomes provides the data needed to support programming and pedagogy in higher education. Careful attention to students' learning by departments and the institution can help create a climate of caring and engagement that supports students' own commitment to their learning (Walvoord, 2004, p. 6). Capstone courses are often used in higher education as a form of departmental assessment. Henscheid (2000) finds that almost half of 707 regionally accredited colleges and universities use capstones as part of their institution's assessment program. The capstone course provides a venue for "assessing how successfully the major has attained the overall goals" (Wagenaar, 1993, p. 214). Strengths and weaknesses of the curriculum are often highlighted by students enrolled in the final course of their accredited major.

In order to design appropriate assessment tools, the student learning outcomes must be clearly defined. Even when student learning outcomes are the primary object of assessment, the basic purpose of evaluation is to adjust elements of the academic plan so that student learning will be improved (Stark & Lattuca, 1997, p. 299).

Research, assessment and retention are areas in higher education that will continue to evolve; such is also true about the area of capstone courses. “Instructional technologies and the changing delivery of student services will affect the content and character of these courses in the future” (Henschied & Barnicot, 2009, para. 7).

Operational Definitions

Capstone Course – course designed by a department or college as a requirement for students during their final year in college.

Civic Engagement – “acting upon a heightened sense of responsibility to one’s communities. This includes a wide range of activities, including developing civic sensitivity, participation in building civil society, and benefiting the common good” (Jacoby, 2009, p. 9).

Civic Engagement Pedagogy – method of teaching that includes activities outside the classroom and/or for the good of the community. This includes volunteerism, service learning, internships/field placements, immersion, and community research, among others.

Service Learning – pedagogy that provides a learning experience set up by an academic professional and guided by a community partner to expose students to learning, reflecting and connecting the relationship between hands-on learning activities and classroom knowledge. Typically the learning experiences carry academic credit.

Immersion course – university course or program that involves significant student immersion in a community or public service that includes academic instruction, focusing on critical, reflective thinking as well as on the development of civic responsibility and/or personal growth of students (Root, Callahan, & Billing, 2005, p. 181).

Reflection – a thorough consideration of all of one's thoughts, the implications of one's frame of reference on those thoughts, and all alternatives to one's thoughts (Learning Management Corporation).

Learning Outcomes- a statement of what a learner is expected to know, understand and/or be able to demonstrate at the end of a period of learning (Gosling & Moon, 2001).

Chapter Three

Research Design and Method

Research Design

The intent of this chapter is to discuss the research methods used to examine capstone courses and their effect on the *development of purpose* and integrity. The research study reviewed different types of capstone pedagogy and explored the impact of civic engagement on development. Collier (2000) noted that the process of student development, in particular identity, “occurs over time and can vary in terms of different dimensions of meaning associated with the same version of college student” (p. 295). Understanding the role of pedagogy in the capstone course gave a more in-depth understanding of senior students as they transition to their career or pursue graduate education.

The mixed method study incorporated methodological triangulation involving the use of document review and review of survey data. Methodological triangulation is one of the four basic types of triangulation identified by Denzin (2006) in his book *Sociological Methods: A Sourcebook*. The combination of data derived through the use of different methods, has been identified by a variety of authorities as a key element in the improvement of social science, including educational research (Gorard, 2004, p. 7).

Quantitative research. Quantitative studies also filter out external factors, if properly designed, and so the results gained can be seen as real and unbiased (Shuttleworth, 2008, para. 7). The choice of using a mixed method design that includes quantitative methods was made based on the specifics of the data that needed to be collected. The research study takes into account faculty beliefs about teaching methods. It focuses on the actions and decisions faculty make as they design and implement their capstone courses. Since this is an exploratory study, a

major portion of data collected have provided a description of faculty instructional plans as gleaned from their course syllabi.

Site Selection/University Profile

Located in Morgantown, WV, West Virginia University (WVU), is a research university (High Research Activity) as classified by the Carnegie Foundation for the Advancement of Teaching. In 2008-2009, WVU awarded 5,926 degrees (www.about.wvu.edu). WVU has 13 colleges and schools offering 193 degrees in total. Over 90% of WVU instructional/tenure track faculty have earned doctorates or first-professional degrees in their discipline (www.about.wvu.edu).

This site was chosen due to the diversity in capstone pedagogies and the interdisciplinary nature of the capstone requirement. It was also chosen due to the fact that it is one of the largest land grant institutions, providing a university-wide set of goals and outcomes.

Capstone Course Selection

Courses titled “capstone” in the department and undergraduate course catalog were included in the study. The capstone experience at West Virginia University is defined as: an academic experience in which students demonstrate their abilities to:

1. Gather material independently, as needed.
2. Think critically about and to integrate the theoretical and/or practical knowledge that they have acquired throughout their undergraduate careers.
3. Reflect on the ethical issues that are implicit in their project and/or their project’s design.

These abilities are demonstrated in a significant project that has an oral and written component (www.wvu.edu). A list of WVU capstone courses was gathered and all 202 capstone instructors were invited to participate in the study during the Spring 2011 semester.

The survey was given via email to the potential participants. There was a two week collection deadline. Prior to the deadline, the researcher sent two reminders to each participant. After the deadline, the researcher conducted two follow-up reminders to increase the response rate. Each of the surveys was analyzed and compared in order to answer the research questions presented in Chapter One. To further analyze the sample, the researcher organized the courses based on the definitions of capstone courses reviewed in Chapter Two. The researcher also collected relevant course syllabi.

Due to the efficient and economical advantages of survey research, some data were collected through this chosen method. Although all methods of collection have advantages and disadvantages, survey methods can target the collection of multiple variables that yields responses to analyze. Three basic technical developments come together to constitute the core of the sample survey method (Rossi, Wright, & Anderson, 1983):

1. Sampling non-institutionalized human populations: Techniques have been developed that enable the drawing of unbiased samples of the non-institutionalized population.
2. The art of asking questions: Enough experience has accrued to make it possible to write questionnaires and interview schedules that will elicit valid and reliable answers on a wide variety of topics.
3. Multivariate data analysis: Technical developments in data processing along with developments in statistics make it possible to calculate the net relationships between variables embedded in complex relationships with other variables (p. 146).

The quality of the sample depends entirely on the stage of the research and how the information is used (Rossi, Wright & Anderson, 1983, p. 146).

Qualitative research, broadly defined, means "any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification" (Strauss & Corbin, 1990, p.17). For the purpose of this research, review of written course syllabi is defined as text. Qualitative research includes both field observations and analysis of texts when the term text is broadly defined (Ambert, Alder, Alder, & Detzner, 1995, p. 881).

Documentation reviews provide the opportunity to get information that already exists and explains the course goals in detail. For this study, the documentation review covered four research areas and they are as follows:

1. Purpose: increasing ability to be intentional, to assess interests and options, to clarify goals, to make plans, and to persist despite obstacles (Chickering & Reisser, 1993, p. 209).
2. Integrity: reviewing personal values in an inquiring environment that emphasizes diversity, critical thinking, the use of evidence, and experimentation (Chickering & Reisser, 1993, p. 235).
3. Civic Engagement Pedagogy: method of teaching that includes activities outside the classroom for the good of the community. This includes volunteerism, service learning, internships/field placements, immersion, and community research, among others.
4. Reflection: consideration of action or activity directly tying knowledge and understanding to learning.

Analysis of Survey

In order to answer the research questions presented in Chapter One, survey data were analyzed using coding techniques and frequencies. In addition, percentages and frequencies were presented for each of four areas in the study: purpose, integrity, civic engagement, and reflection.

Research question one. In order to answer Research Question One, the researcher coded data from the course syllabi of Student Learning Outcomes (SLOs) and compared them to Bloom's Revised Taxonomy (Krahtwohl, 2002, p. 213).

1. What cognitive levels do faculty emphasize in capstone courses as articulated by their student learning outcomes?
 - a. How often do the themes of student learning outcomes in capstone course relate to the *development of purpose*?
 - b. How often do the themes of student learning outcomes in capstone course relate to the *development of integrity*?

The SLOs were coded into themes with frequencies and percentages. The verbs used in the SLOs were coded separately to determine order frequency. The verbs utilized in the SLOs were tallied and compared to Bloom's Taxonomy in order to show frequency of different cognitive levels. In addition, survey question 16 was coded and used as evidence of intended student learning outcomes and coded into the themes. This coding of survey question 16 into themes may (a) add to the frequencies of some of those already defined themes or (b) create new themes. For the purpose of answering sections a and b of Research Question One, the previously coded student learning outcome themes (from the syllabus and survey question 16) are totaled for frequency of relationship to the description of *development of purpose* and the description of the *development of integrity*. Thus, the extent to which the SLO themes are related to the

development of purpose and/or the *development of integrity* in the capstone courses are documented.

Research question two. To determine the extent of the development of purpose in the different capstone models, survey question 7, survey question 14, and survey question 18 were analyzed.

2. To what extent does each of the different capstone models emphasize the development of purpose or integrity?
 - a. To what extent do capstone instructors use activities (both in and out of the class) that support *purpose*?
 - b. To what extent do capstone instructors use activities (both in and out of the class) that support *integrity*?

To determine the extent of the *development of purpose* in the different capstone models, survey question 7 and survey question 14 (a,c,e,g,i) and survey question 18a were considered. To determine the extent of the *development of integrity* in the different capstone models, survey question 7, survey question 14 (b,d,f,h,j), and survey question 18d were considered. For Research Question Two a and b, the document analysis in Appendix A presented the frequency of the relationship between the course activity and the *development of purpose* and the *development of integrity*. For example, if a course required the writing of a résumé, this was marked in Appendix A as the activity having a relationship to the *development of purpose*. Continuing this example, if a course required a cultural presentation, the activity was shown as having a relationship to the *development of integrity*. Thus, the extent to which different capstone models emphasize the *development of purpose* and/or the *development of integrity* was documented. Additionally, the relationship of the capstone course activities to the development of purpose and/or the *development of integrity* was determined.

Research question three. If the respondents indicated a response of no for survey question 11, they were excluded from the analysis for this particular research question.

3. To what extent do capstone instructors utilize civic engagement pedagogy in capstone courses?
 - a. Do courses with civic engagement pedagogy enhance the *development of purpose*?
 - b. Do courses with civic engagement pedagogy enhance the *development of integrity*?

If included, the frequency of survey questions 11, 12 and 17 (a,c,e,g,i), and 18 (e,f) were used to answer Research Question Three. Section a of Research Question Three was addressed by reporting the relationship between survey questions 14 (a,c,e,g,i), and survey question 11, and survey question 18 (e). Section b of Research Question Three was addressed by reporting the relationship between survey questions 14 (b,d,f,h), survey question 11 and survey question 18 (f).

Research question four. This research question was answered by using frequencies of survey data from survey questions 15, 17 (b,d,f,h,i) and 18 (b,c).

1. To what extent do capstone instructors utilize reflection in capstone courses?
 - a. Do courses that promote reflection enhance the *development of purpose*?
 - b. Do courses that promote reflection enhance the *development of integrity*?

As seen in Table 5, Research Question 4a was answered by reporting the relationship between survey question 14 (a,c,e,g,i), question 15 (a,b,c) and 18 (c). Research Question 4b was answered reporting the relationship between survey question 14 (b,d,f,h), 15 (a,b,c) and 18 (b).

Demographics. The demographics covered in the survey include gender and race. Additionally in the demographics, detailed information about the faculty background and general

course information was integrated. The alignment of research question with the actual survey questions and course syllabi are presented in Table 5.

Table 5

Instrument Analysis Data

Research Question	Survey Question	Syllabus Review
1	16	x (Syllabi)
a.	16	x
b.	16	x
2	7, 14, 18	
a.	7, 14 (a,c,e,g,i), 18 (a)	x (Appendix A)
b.	7, 14 (b,d,f,h,j), 18(d)	x (Appendix A)
3	11,12,17 (a,c,e,g,i), 18 (e,f)	
a.	14 (a,c,e,g,i), 17 (a,c,e,g,i), 18(e)	
b.	14 (b,d,f,h), 17 (a,c,e,g,i), 18 (f)	
4	15, 17 (b,d,f,h,j), 18 (b,c)	
a.	14 (a,c,e,g,i), 17 (b,d,f,h),18 (c)	
b.	14 (b,d,f,h), 17 (b,d,f,h), 18 (b)	
Demographics	1,2,3,4,5,6,8,9,10,13,19, 20,21,22,23,24,25,26	
Capstone Models	7	

Limitations of Research Design

One limitation to survey research is the low response rate that may occur from faculty respondents. This may lead to a presumed bias in the data collected because “research indicates that nonrespondents tend to be less well educated and from lower socioeconomic status groups than respondents” (Patten, 2001, p.2). However, the researcher gathered course syllabi to analyze and to determine the consistency with survey results. Course syllabi can provide more detailed information at the university.

Surveys usually work best when they contain objective items. Responses can be scored objectively, such as items with choices that students check and short-answer items that require very limited responses (Patten, 2001, p.3). The ability to determine data that reflect the students' perception of learning is another limitation to this study. Although, this research more clearly explains the intent of capstone courses, this research is not looking at student perceptions. Student perceptions would be a topic for future research studies.

Pilot Study

A pilot study was completed by the researcher. Permission was granted by the Associate Provost of Undergraduate Academic Affairs, per Appendix B. Pilot participants reviewed the cover letter and evaluated its clarity (see Appendix C). Participants also critiqued the survey by determining if they understood the questions. Each participant was given a week to answer the survey and respond by emailing the syllabi to the researcher. Immediately following the submission of the pilot data, the researcher sent a follow up survey with five open-ended questions:

1. Was the cover letter clear?
2. Were the instructions on the survey clear and detailed?
3. Were any of the questions misleading or hard to understand?
4. Do you have any suggestions for improving the survey design?
5. Do you have suggestions on how to ensure faculty will follow through with emailing the syllabi?
6. Was it challenging to answer question #7?

Pilot Study Results

The pilot study results permit the researcher to explore ideas, adaptations and increase clearer findings in the main study. By observing the full continuum of delivering, collecting and analyzing the data, often unanticipated problems can be revised or modified to enhance success. SurveyMonkey™ was used for the survey instrument that was created by the researcher and administered online. The pilot study was conducted with two specific objectives. First, the pilot tested the survey instrument to determine if there were any system issues with using an on-line survey. Second, the pilot was used in assessing the feasibility of the study and assessing whether the research protocol was realistic and workable.

For the pilot study, the researcher solicited five capstone instructors by random sample of capstone instructor emails. Three capstone instructors completed the survey and two of the participants submitted their syllabi as requested in the initial request to join the pilot study. Of the three, one was a full-time tenured faculty, one was an assistant professor and the final participant was a lecturer. Also, one respondent (33.3%) was female and the other two (66.7%) were male. All three respondents (100%) noted race as white. The courses included in the pilot were Contemporary Business Strategy, Capstone Seminar in Communication, and Capstone Experience (Psychology). One of the instructors has been teaching capstones for 10 years and two have been teaching for more than 10 years.

The researcher was able to successfully download the data from SurveyMonkey™ and upload the spreadsheet into SPSS for further analyzing. Through feedback from the pilot study, the researcher was able to confirm that the questions in the survey were clear and easy to understand. Specifically, the researcher targeted question number seven due to the critical application of this question to the research questions. It was determined that the question was

applicable and easy to answer by the participants. In the pilot, all respondents (100%) noted that the capstone course they taught fell in the category of department or discipline based. Further results from the survey portion of the pilot confirmed that there was an issue with the functioning of one of the large instrument questions (question 18). This was confirmed and the issue was corrected by the researcher updating the format of the question to allow multiple answers per line.

The researcher targeted question 16 (In one phrase, describe the impact of your course) in order to confirm that it was clear and elicited the appropriate or intended answer. In the pilot, faculty did successfully answer this question. The instructors responded with “critical thinking”, “synthesize learning”, and “final piece of the structure, locking or wedging the structure together, giving strength”.

The syllabi review forms were another important section of the pilot study. Five capstone instructors were solicited and of those, two completed the request and submitted their syllabi. The researcher used the forms to collect the data from the syllabi in terms of activities assigned and student learning outcomes. Each form was easy to use and understand and the information was collected and entered into an EXCEL file. This file was able to be uploaded into SPSS for further analysis. The results of the pilot show that two activities included the development of purpose while no activities included the development of integrity. Two of the activities included civic engagement while one activity included reflection. Three of the student learning outcomes (SLOs) supported the development of purpose and two of the SLOs supported the development of integrity. Finally, two SLOs encouraged civic engagement while five SLOs encouraged reflection. While the result of the syllabi forms was positive, the researcher decided to include a new section to each form that will show the total activities and SLOs for each

syllabus. SLOs were also added to Nvivo software in order to be counted for frequency and percentage of themes. The researcher found that this was successful and already saw emerging themes for analysis. Specifically, communication and critical thinking each have four references in the SLOs of the two syllabi collected.

For the researcher's follow-up questions, only two of the three respondents participated. One respondent noted that he had trouble with the functioning of one of the questions on the online survey and the others experienced success. Each participant requested a field where he or she could clarify or add additional comments. The researcher added an open-ended question at the end of the survey based on these findings. Both respondents said the cover letter and email were clear and the directions were easy to follow and understand.

Researcher's Experience

The researcher earned a Bachelor's Degree in Sociology and Anthropology at West Virginia University in May 2000. The researcher continued on to earn her Master's degree in the field of Applied Social Research in the Sociology Department. As a master's student, the researcher created the University's "Graduating Senior Survey." Currently, the researcher is a candidate for the Doctoral degree in Higher Education Administration at West Virginia University. In addition to the education, the researcher has been a full-time administrator at WVU since 2001 in the areas of Academic Advising and Civic Engagement.

Chapter Four

Results

Introduction

This research study reviewed capstone courses taught at West Virginia University to analyze the frequency of activities, goals, and outcomes that enhance the development of a student's purpose and/or integrity. The courses were analyzed using two of Chickering's Seven Vectors (1993). In addition, the student learning outcomes were coded into themes and the verbs in the student learning outcome (SLO's) were compared to the model of Bloom's Taxonomy (2002). In total, 64 faculty respondents completed the survey. That constitutes a response rate of 32%. In addition, the researcher gathered 27 syllabi from these faculty.

This chapter begins by reviewing the results of the pilot study and then discusses the demographics of the respondents, as well as the basic information about their teaching positions and experiences with capstone courses. Next the research questions are addressed. The research questions are as follows:

1. What cognitive levels do faculty emphasize in capstone courses as articulated by their student learning outcomes?
 - a. How often do the themes of student learning outcomes in capstone course relate to the *development of purpose*?
 - b. How often do the themes of student learning outcomes in capstone course relate to the *development of integrity*?
2. To what extent does each of the different capstone models emphasize the *development of purpose* or integrity?
 - a. To what extent do capstone instructors use activities (both in and out of the class) that support the *development of purpose*?
 - b. To what extent do capstone instructors use activities (both in and out of the class) that support the *development of integrity*?
3. To what extent do capstone instructors utilize civic engagement pedagogy in capstone courses?

- a. Do courses with civic engagement pedagogy enhance the *development of purpose*?
 - b. Do courses with civic engagement pedagogy enhance the *development of integrity*?
4. To what extent do capstone instructors utilize reflection in capstone courses?
- a. Do courses that promote reflection enhance the *development of purpose*?
 - b. Do courses that promote reflection enhance the *development of integrity*?

Demographics

The demographics in the survey were placed strategically at the back of the survey in order to allow the faculty to begin the survey with questions they may see as more beneficial and interesting. The gender and race of the respondents was not a central part of the research questions; however, they were collected in order to better understand the pool of respondents.

As seen in Table 6, females in the survey represented 40.6 percent of the respondents while 45.3 percent were males. Nine respondents did not answer this question.

Table 6

<i>Gender</i>	N	%
Female	26	40.6
Male	29	45.3
Missing	9	14.1
Total	64	100

Respondents were also asked to identify the race with which they identify. The majority (80%) of respondents were White. Three respondents (5%) identified as Asian, two of the respondents (3%) were Black or African American, while two respondents (3%) were Hispanic/Latino or

Multiracial. Referring to Table 7, 55 total respondents answered the racial identity question; however, there are 58 responses because two respondents identified with more than one racial identity. One respondent identified with White and Hispanic/Latino, and one respondent identified with Multiracial, White and Black or African American.

Table 7

<i>Race</i>	N	%
White	51	79.6
Asian	3	4.6
Black or African American	2	3.1
Hispanic/Latino	1	1.5
Multiracial	1	1.5
Missing	9	14.0
Total	67	104.3

Note: two respondents indicated more than one race

Of the 64 total respondents, 63 respondents answered the question about tenure, 35 (55.5%) were tenured at WVU and 28 (44.5%) were not. Approximately 41% of the respondents in this survey were full-time professors. Following full-time professors were assistant professors (28%) and associate professor (16%). As shown in Table 8, lecturer (8%) was fourth and adjunct professor (5%) was the fifth largest cohort. Instructor (2%) had one respondent and one responded did not answer this question.

Table 8

Current Rank

Rank	N	%
Full Professor	26	40.6
Assistant Professor	18	28.1
Associate Professor	10	15.6
Lecturer	5	7.8
Adjunct Professor	3	4.7
Instructor	1	1.6
No Answer	1	1.6
Total	64	100

Sixty-two respondents teach a capstone course and two do not teach and were told they did not need to complete the survey. Of those teaching a capstone course, 25 (41%) have taught for 1-5 years, 11 (18%) have taught for 6-10 years, and 25 (41%) have taught beyond 10 years as reflected in Table 9.

Table 9

<i>Years Teaching</i>	N	%
1-5 years	25	41.0
6-10 years	11	16.4
Beyond 10 years	25	41.0
Missing	1	1.6
Total	62	100.0

Course related questions provided a greater understanding of the context in which the courses are delivered at West Virginia University. Referring to the classification of the capstone, as shown in Table 10, the survey results reveal that 14 percent of the capstones were required for general education; six percent of the courses were counted as electives, while 85 percent of the courses were required for the major.

Table 10

Capstone Classification

Requirement	N	%
Required for major	53	85.4
Required for general education	9	14.5
Counted as an elective	4	6.4
Other	0	0
Missing	1	1.6

Note: Respondents answered all that apply

As noted in Table 11, the majority of the capstone course syllabi were created by the instructor and only 17 percent of the departments use the same syllabus for all the department capstone courses. In addition, nearly two-thirds of the faculty (62.5%) created his or her own student learning outcomes.

Table 11

Course syllabus

Statement	N	%
Created own syllabus	51	79.7
Created own student learning outcomes	40	62.5
Department uses the same syllabus for all	11	17.2
Adapted content from guidelines	18	28.1
Missing	3	4.8

Note: Respondents answered all that apply

The survey respondents were asked to answer three questions about assessments of their course. The first question asked the respondent to identify who evaluated the capstone course out of the following: faculty, students, departments, administration, and other. Fifty (81%) of the respondents noted that students evaluated the capstone courses (see Table 12). Faculty and department each were chosen as evaluators by 25 (40%) of the respondents. Administration was chosen by 11(18%) respondents and 2 (3%) of the respondents noted that they did not know who evaluated the capstone courses. In the “other” assessment category, the responses were, “our clients’ meetings have an impact as well” and “working professionals.” The second question in the assessment section stated “If your department, unit, or college evaluates the capstone

course(s), how is that information used?” This was an open-ended question that did not result in consistent themes and the researcher did not analyze this information.

Table 12

Assessment

Course Evaluators	N	%
Students	50	80.6
Faculty	25	40.3
Department	25	40.3
Administration	11	17.7
Don't Know	2	3.2
Other	2	3.2
Missing	7	11.2

Finally, in the assessment section of the survey, the respondents were asked if the course they taught is tied to comprehensive institutional assessment. Fifty-four respondents completed this question (see Table 13). Twenty-three faculty (36%) reported their courses are tied to institutional assessment while 25 instructors (39%) do not know.

Table 13

Comprehensive Assessment

	N	%
Yes	23	35.9
No	6	9.4
Don't Know	25	39.1
Missing	8	12.9

Research Question One

The first research question asked was, “What cognitive levels do faculty emphasize in capstone courses as articulated by their student learning outcomes (SLO’s)?” The researcher collected 27 syllabi from the respondents in the study. Thirteen syllabi (48%) were from courses in the Eberly College of Arts and Sciences (see Table 14). Five (18.5%) were from the Davis College of Agriculture, Forestry, and Consumer Sciences. College of Engineering and Mineral Resources accounted for 3 (11%) of the syllabi. Both the Perley Isaac Reed School of Journalism and the College of Physical Activity and Sport Sciences submitted two syllabi. School of Nursing provided one syllabus.

Table 14

Syllabi Collected

College or School	N	%
Davis College of Agriculture, Forestry, and Consumer Sciences	5	18.5
Eberly College of Arts and Sciences	13	48.1
College of Business and Economics	1	3.7
College of Engineering and Mineral Resources	3	11.2
Perley Isaac Reed School of Journalism	2	7.4
School of Nursing	1	3.7
College of Physical Activity and Sport Sciences	2	7.4
Total	27	100

The research question was answered by analyzing the verbs used to complete the SLO's.

Twenty-one of the syllabi contained student learning outcomes, while 6 (22%) did not. The results revealed a total of 144 verbs. This list of verbs was then further compared to Bloom's Revised Taxonomy listing of cognitive levels as illustrated in Figure 1.

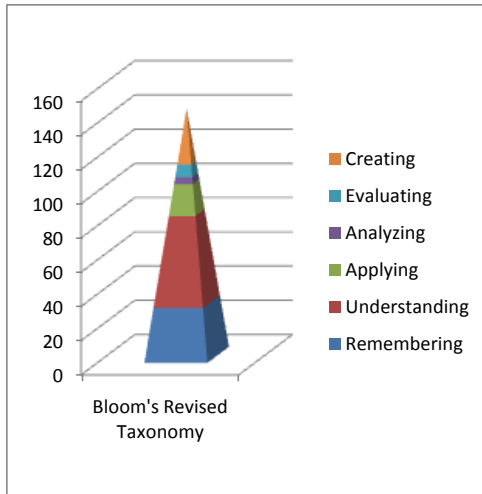


Figure 1: Cognitive Levels in Capstone Courses

As shown in Table 15, seventy percent of the verbs matched with the lower three cognitive levels of the Taxonomy, while 30% relates to the top three cognitive levels.

Table 15

Student Learning Outcomes Reported in Course Syllabi

Cognitive Level	N	%
Higher Level		
Creating (design, develop, formulate)	32	22.2
Evaluating (argue, defend, judge)	7	4.8
Analyzing (contrast, criticize, differentiate)	4	2.7
Total	43	29.7
Lower Level		
Applying (demonstrate, solve, use)	18	12.5
Understanding (discuss, explain, identify)	52	36.1
Remembering (define, repeat, list)	31	21.5
Total	101	70.1

For example, a sample of the verbs is used along with the student learning outcome below (see Table 16).

Table 16

Bloom's Revised Taxonomy

Higher Level Verbs

Develop an ability to express their opinions in academic writing.

Evaluate the ethical dimensions involved in the complex relationship between Anthropologists and the communities they study.

Utilize the concept of strategic management.

Lower Level Verbs

Comprehend professional league structure of labor relationships.

Identify the principal methods used by anthropologists in their research.

Apply ethical decision making in your reporting and producing.

Research question one (a) and (b) asked “How often do the themes of student learning outcomes in capstone course relate to the *development of purpose* and *the development of integrity?*” To answer this section of research question one, the researcher coded the student learning outcomes (SLO’s) in NVivo. The results to survey question 16 provided a clear understanding of the instructor’s opinion of their courses impact, which was added to the coded SLOs. The answer was required to be in one phrase and the most common phrase was “critical thinking” (42%), followed by “synthesis learning” (27%). There were 26 total themes that emerged from the SLOs in the syllabi collected. Of these themes, seven (23%) related to integrity (see Table 17). Integrity in this study is defined by Chickering & Reisser (1993) as

reviewing personal values in an inquiring environment that emphasized diversity, critical thinking, the use of evidence, and experimentation. Nine (35%) of the themes related to purpose, defined as increasing ability to be intentional, to assess interests and options, to clarify goals, to make plans, and to persist despite obstacles (Chickering & Reisser, 1993, p. 209). Themes such as “research skills”, “collaborative learning”, and “technical knowledge” were represented (38%) in the other category.

Table 17

Student Learning Outcome Themes

Vectors	N	%
Developing Purpose	9	34.6
Resume writing		
Connecting major to work		
Developing Integrity	7	26.9
Global awareness		
Ethics		
Other	10	38.4
Up to date in field		
Communication		

Research Question Two

The second research question was “To what extent does each of the different capstone models emphasize the *development of purpose* or *integrity*? The respondents were asked to self-

report the model they felt best described their course. In Table 18, the results of the capstone courses models are shown along with the definition of each. Forty-eight (75%) of the courses were classified as Department based, eight (12%) classified as Interdisciplinary, three respondents classified their course as career-planning, and two respondents chose the other category for their capstone course. Of the 64 respondents, three did not answer this question.

Table 18

Capstone Course Model

Model Description	N	%
Department Based the overriding goal of is to summarize learning within the academic major	48	75
Interdisciplinary offer students an opportunity to synthesize general education, major classes, and cocurricular learning	8	12.5
Career-planning assist students as they engage in pre-professional development	3	4.7
Other service-learning and immersion are types of courses that would fit in "other"	2	3.1
Missing	3	4.7
Total	64	100

To explore the results of the different capstone models, frequencies on research questions 14 (a,b,c,d,e,f,g,h,i) and 18 (a,d) were run for each different capstone model represented in the study and the respondents. The Likert scale responses range from 3 (Very Important) to 1 (Unimportant) for question 14 and from 5 (Strongly Agree) to 1(Strongly Disagree) in question

18. Tables 19 and 20 represent the different models and the outcomes for integrity and purpose. In Table 18, a response rate of 100% was achieved by Career-planning in 4 or the 6 skill sets, “assist students on career choice”, “improve ability of student to step outside of their comfort zone”, “opportunity to clarify goals”, and “help students clarify personal interests”. Department based and Interdisciplinary courses scored above 91% in the skill of “ability to persevere in spite of mistakes or obstacles”.

Table 19

Capstone Course Models Purpose

	Developing Purpose											
	Career Choice		Goals		Skill		Comfort Zone		Obstacles		Clarify Purpose	
	N	%	N	%	N	%	N	%	N	%	N	%
Department based	27	56.3	37	77.1	37	77.1	41	85.5	39	91.3	38	79.2
Interdisciplinary	5	62.5	5	62.5	7	87.5	8	100	8	100	7	87.5
Career-planning	3	100	3	100	2	66.6	3	100	2	66.6	3	100
Other	1	50	2	100	2	100	1	50	2	100	2	100

In Table 19, Interdisciplinary courses scored above 75% on all of the skills except “encourage students to affirm values and beliefs” scoring only 50%. Contrary to developing purpose, Department based courses had lower percentages in developing integrity. Career-planning and Other categories each had 100% response rate in the areas of “understanding of personal and professional balance” and “help students provide evidence to support assumptions”.

Table 20

Capstone Course Models Integrity

	Developing Integrity											
	Personal Balance		Cultural Awareness		Affirm Values		Civic Responsibility		Define Positions		Support Evidence	
	N	%	N	%	N	%	N	%	N	%	N	%
Department based	27	56.2	35	72.9	32	66.6	37	56.3	37	56.3	40	83.3
Interdisciplinary	6	75	6	75	4	50	6	75	7	87.5	7	87.5
Career-planning	3	100	2	66.6	2	66.6	2	66.6	3	100	3	100
Other	2	100	2	100	1	50	1	50	1	50	2	100

Table 21 represents respondents in each capstone model that answered “Very Important” or “Moderately Important” to all six skills (considered a positive answer) for developing purpose and developing integrity. For developing purpose, Department based and Interdisciplinary both had 50% of the respondents answer positively. The majority of the Career-planning respondents answered positively to all six variables, while the Other classification had no respondents answer all six variables positively. In terms of integrity, Department based, Interdisciplinary, and Other all had only 1 respondent. Further, the Career-planning model had no respondents answer all six positively.

Table 21

Capstone Course Models Combined Skills

Developing Purpose	Total N	skills %
Department based	24	50
Interdisciplinary	4	50
Career-planning	2	66.7
Other	0	0

Developing Integrity	Total N	skills %
Department based	1	2.1
Interdisciplinary	1	12.5
Career-planning	0	0
Other	1	50

Table 22 represents the results gathered in response to research question two (a, b), “To what extent do capstone instructors use activities (both in and out of the class) that support *purpose* and *integrity*.” There were a total of 73 explicit and graded activities listed in the syllabi collected. Of the 27 syllabi, 5 (18%) did not describe specific activities in the syllabus. Six of the activities (8%) corresponded to the definition of purpose and five (7%) corresponded to the definition of integrity. The majority of the activities (85%) do not directly coincide with the *development of purpose* or the *development of integrity*.

Table 22

Activities (in and out of classroom)

Purpose		Integrity	
N	%	N	%
6	8.2	5	6.8

Note: total of 73 activities

Research Question Three

The researcher explored civic engagement pedagogy in question three. Of the total 60 respondents who answered question 11 in the survey, 41% confirmed that civic engagement is a component of their capstone course, while 52% said it was not a component. Only 1 respondent did not know if civic engagement was a component of his or her course. Out of 37 respondents, 51% noted that they had specific learning outcomes for civic engagement while 49% said they did not. Thirty two faculty further responded to question 13 reporting how much if any civic engagement counts in the total course grade. Seventy-five percent of the respondents count civic engagement as a substantial, moderate or small part of the grade (see Table 23).

Table 23

Civic Engagement Grade

Amount	N	%
Counts as substantial part of the grade	13	40.6
Counts as a moderate part of the grade	7	21.9
Counts as a small part of the grade	4	12.5
Does not count at all	8	25.0

As noted in Table 24, of those respondents who answered that they have a civic engagement component, 69% attribute the civic engagement to specific learning outcomes in their course.

Table 24

Civic Engagement in the Capstone

Included in course	N	%
CE Student Learning Outcomes (SLO's)	18	69.2
Connected to Grade	23	88.4

Additionally, Table 25 shows the results from survey questions 17 (a,c,e,g,i) for the all respondents. Twenty-four percent of the respondents indicated that they strongly agree that they give students class time to go out into the community, while thirty-four percent strongly disagree. Thirty-one percent of the respondents strongly agree that they dedicate a portion of their grade to civic engagement, while forty-two percent strongly disagree. Forty-one percent of the respondent agree that they encourage students to think about the ways they can give back to their community. A majority (73%) of the respondents feel it is important for students to learn through real world examples while only four percent disagree or strongly disagree. Eighty-six percent of the respondents use their course as an opportunity for students to demonstrate skills associated with effective civic engagement.

Table 25

Use of Civic Engagement (CE)

	Strongly Agree		Agree		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%
Class time in community	13	24.5	8	15.1	14	26.4	18	34.0
CE for grade	17	30.9	7	12.7	8	14.5	23	41.8
Give back	9	16.7	22	40.7	15	27.8	8	14.8
Real world examples	41	73.2	12	21.4	1	1.8	2	3.6
CE skills	23	45.1	21	41.2	4	7.8	3	5.9

Note: Missing = 6 respondents

To answer research question 3 (a,b) the courses that indicated that they have a civic engagement component were compared to the results of question 14 (a,b,c,d,e,f,g,h,i) and question 18 (e,f), as seen in Table 26. Through the survey, twenty-two (75%) respondents indicated “assist students on career choice” was either very or moderately important. Twenty-four (92%) respondents indicated “offer students the opportunity to clarify goals”, “foster skills that align action with purpose”, “improve ability of student to step outside their comfort zone”, and “ability to persevere in spite of obstacles”, as very or moderately important. Twenty-five (99%) respondents felt that “activities in their course help students clarify their personal interests” often or sometimes occurred in the capstone course. For the questions related to integrity, twenty four (92%) of the respondents answered that “activities in their course help students thoughtfully provide evidence to support assumptions” and “assist students in defining

their own positions while remaining open and tolerant” were very or somewhat important.

Twenty-three (88%) respondents noted that “provide students with the understanding of personal and professional balance”, “provide social and cultural awareness”, and “enhance awareness of civic responsibility” are very or somewhat important to the capstone course while twenty-one (81%) respondents choose “encourage students to affirm values and beliefs” as very or somewhat important.

Table 26

Civic Engagement Pedagogy
(Combined Very Important, Moderately Important)

Purpose	N	%
Career Choice	22	74.7
Goals	24	92.3
Skill	24	92.3
Comfort Zone	24	92.3
Obstacles	24	92.3
<i>(Combined Strongly Agree and Agree)</i>		
Clarify Purpose	25	99.2
<hr/>		
Integrity	N	%
<hr/>		
Personal Balance	23	88.5
Cultural awareness	23	88.5
Affirm values	21	80.8
Civic responsibility	23	88.5
Define positions	24	92.3
<i>(Combined Strongly Agree and Agree)</i>		
Evidence support	24	92.3

Note: 1 survey was missing from the data

Research Question Four

The researcher explored reflection in research question four. As noted in Table 27, the three main questions that determined the faculty's use of reflection were, "I use reflection as a learning tool in my capstone class", "My activities in class include reflection", "I expect my students to reflect outside of class time". Twenty-four (37%) of the respondents noted that they always use reflection as a learning tool, seventeen (27%) often use reflection as a learning tool, and seven (11%) never use reflection as a learning tool. Twenty-two (34%) of the respondents said that activities in their capstone course always include reflection, seventeen (27%) often use activities that include reflection, and eight (12%) never use activities that include reflection.

Table 27

Reflection in Capstone Course

	Always		Often		Never	
	N	%	N	%	N	%
Use reflection as a learning tool	24	37.5	17	26.6	7	10.9
Activities in class include reflection	22	34.4	17	26.6	8	12.5
Expect students to reflect outside of class time	24	37.5	21	32.8	3	4.7

To further clarify the amount of reflection faculty use in their courses, specific reflection questions were asked (see Table 28). For the statement "I specifically design activities that allow students to think about what they are learning", thirty (47%) strongly agree, twenty three (36%) agree, no respondents disagree, while 2 (3%) of respondents strongly disagreed. The statement "My course give students the opportunity to discuss personal beliefs", seventeen (27%) strongly

agreed, twenty seven (42%) agreed, four (6%) disagreed, while six (9%) strongly disagreed. The statement “I require that my students look at learning from many points of view” was answered by seventeen (26%) noting they strongly agree, thirty one (48%) agree. The statement “Reflection activities account for a portion of the overall grade” was answered by nineteen (31%) answering strongly agree, eighteen (29%) agree, eight (12%) disagree, while seven (11%) strongly disagree. Finally, the statement “I believe that reflection should be included in a capstone course” was answered by twenty three (36%) stating they strongly agree, twenty one (33%) agree.

Table 28

Use of Reflection

	Strongly Agree		Agree		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%
Allow students to think	30	46.9	23	35.9	0	0	2	3.1
Discussion	17	26.6	27	42.2	4	6.3	6	9.4
Look at learning	17	26.6	31	48.4	4	6.3	2	3.1
Reflection for grade	19	29.7	18	28.1	8	12.5	7	10.9
Should be included	23	35.9	21	32.8	4	6.3	3	4.7

Of the respondents that answered either “always” or “often” or “strongly agree” or “agree” to the reflection questions shown above (total of 34), Table 29 shows the results compared to the questions related to *development of purpose* and *development of integrity*.

Table 29

*Courses Using Reflection
(Combined Very Important, Moderately Important, Strongly Agree and Agree)*

Purpose	N	%
Career Choice	26	76.5
Goals	34	100
Skill	33	97
Comfort Zone	32	94.2
Obstacles	32	94.2
Clarify Purpose	34	100
Integrity	N	%
Personal Balance	27	79.4
Cultural awareness	34	100
Affirm values	32	94.2
Civic responsibility	27	79.4
Define positions	33	97
Evidence support	33	97

Note: data derived from 34 total respondents

Chapter Five

Summary and Recommendations

This chapter examines results of the data collected in this study. In addition, this chapter reviews conclusions and implications. The purpose of this study was to determine whether capstone courses support the development of purpose (Chickering & Reisser, 1993, pp. 209-234) and integrity (Chickering & Reisser, 1993, pp. 235-264) through curriculum development and pedagogy. The researcher briefly discusses the demographic information for the respondents and further discusses the impact of different types of capstone courses on the development of integrity and purpose in students. Second, recommendations are made for best practices. Finally, recommendations for future research are presented.

Summary

Gender and race demographics for the research were consistent with the demographics of West Virginia University's general faculty demographics. As reported in Chapter 4, females in the survey represented 41% of the respondents while 45% were male. Again consistent with the demographics of WVU faculty, the majority of respondents (92%) were white.

WVU employs 2315 full-time and 710 part-time instructional faculty. As reflected in Chapter 4, the majority (41%) of the respondents in this survey were full-time professors which . Of the full-time professors that responded, 55% were tenured at WVU. The number of years each faculty has taught capstone courses was split evenly between (1-5) years and (beyond 10 years) at 41%. The majority of capstone course taught at WVU (83%) were classified by the faculty as being needed for the major.

Capstone courses provide opportunities to assist higher education institutions in comprehensive assessment. "By its very nature," one recent study suggests, "the capstone course

is a method of summative evaluation.” Such a course “not only assesses previous cognitive learning in the major, but also provides a forum that allows an instructor to assess the student’s overall collegiate experience” (Moore, 2005, p. 440). As determined by the data in this study, 78% of WVU capstone courses are assessed by students, while 39% of the capstone courses are assessed by faculty and/or the department. WVU requires that students fill out Student Evaluation of Instruction questionnaires (SEIs) for every course. This could affect the high percentage of student evaluations. When asked if this assessment was tied to a comprehensive assessment for the University, 36% of the faculty, said yes, while 9% said no. However, the majority, 39% of the faculty, did not know. This information can be interpreted in two different ways. The findings suggest the faculty who are teaching the courses are not informed about the full evaluation process. Considering the majority of the capstone courses in this study were classified as department based courses, department faculty may be strictly focusing on their major of study and not the overall assessment goals of the University. The results of this study support the findings by Henscheid (2000) , 6% that said the course evaluation was not tied to comprehensive assessment, indicate that combined, the majority of faculty (45%) do understand the extent of assessment of capstones at WVU. Further analysis showed that of the capstone instructors that indicated “don’t know”, 88% of the courses taught were required for their major and 60% of the faculty teaching were not tenured faculty.

Research question one. The first research question was “What cognitive levels do faculty emphasize in capstone courses as articulated by their student learning outcomes?” The cognitive domain (Bloom, 1956) involves knowledge and the development of intellectual skills. The revised Taxonomy includes the following six categories: remembering, understanding, applying, analyzing, evaluating, creating. The structure of the revised [Bloom’s] Taxonomy

"provides a clear, concise visual representation" (Krathwohl, 2002) of the alignment between standards and educational goals, objectives, products, and activities. The data suggested that 35% of the verbs used in capstone Student Learning Outcomes (SLOs) related to the category of Understanding. The second highest cognitive level is Evaluating (27%), followed by Remembering (21%). From this analysis, capstone course SLO's at WVU illustrate a majority of lower level cognitive learning. The levels are assumed to be cumulative, with each level of the system building on the successful completion of the previous levels (Granello, 2001, p. 294). When asked to name one phrase to describe their course, the overwhelming majority chose critical thinking; however, critical thinking is described by using outcomes lead by verbs in the top three levels of the Taxonomy. As noted in the data in Chapter 4, the result of the learning outcome coding shows that only 33% were in the top levels, while 67% fell in the bottom levels. Knowing this, WVU capstone courses are not designing courses to meet higher levels of cognitive learning as would be expected in a capstone course.

The next two sections of question one were "How often do the themes of student learning outcomes in capstone course relate to the *development of purpose and the development of integrity?*" Student learning outcomes (SLOs) are influenced and sometimes determined by learning environments (Deem & Brehony, 2000, p. 163). The environment for the different colleges and schools at WVU may also impact the type of SLO that is appropriate for capstone courses.

From the results, the research determined that the current capstones at WVU are more likely to support the *development of purpose* than the *development of integrity*. However, when asked to summarize the course in one phrase, the majority (33%) of the respondents noted critical thinking, which is a skill associated with the *development of integrity*. As higher

education prepares students for citizenship in society, it has a responsibility to foster the development of their critical thinking skills (Lockhart & Borland, 2001, p. 19). From an instructor's perspective in this study, often the intent of the course is linked to the *development of integrity*.

Research question two. Research question two, "To what extent does each of the different capstone models emphasize the *development of purpose or integrity?*", required the respondents to self identify the type of capstone course that they taught or were teaching. The five course types are Department and Discipline based, Interdisciplinary, Transition, and Other. Henscheid and Barnicot (2001) note that varying goals, instructional strategies, and topics separate these course types. The results show that the majority of faculty teach capstone courses that classify as Department or discipline based courses. None of the capstones were classified as transition courses. All capstone courses at WVU are taught through a college or school, so it is not expected that transition courses, mostly taught by career professionals, would be represented. There were few courses classified as career and other. Although the courses represented were from colleges that often use internships as a method of reaching outcomes, these numbers were surprisingly low. The faculty only had a one sentence definition to use when deciding how to classify the course which could be a limitation to the classification results.

When the skills for *development of purpose* were analyzed individually, interdisciplinary courses had overall the most influence on skills that are linked to the *development of purpose*. These courses tended to stress the interrelatedness of different academic majors and their role within society (Henscheid & Barnicot, 2001, p. 87). Based on the definition, this would be a course that would have objectives and outcomes that coincide with the skills that represent the *development of purpose* so the results are expected. When analyzing only the respondents that

answered “Very Important” or “Moderately Important” “Often” and “Sometimes” to the skills questions for *development of purpose*, the researcher found that 50% of the respondents focus on these skills. This result suggests that interdisciplinary courses do seek to enhance the development of purpose.

Career-planning courses were the second highest in terms of individual responses to the skill questions for *development of purpose*. Although the total of number of career courses was low, it is important to note that each skill was answered positively by at least two of the three respondents. Classroom topics for career-planning courses included current trends in the field, procedures for licensure, resume building and job seeking (Henschied & Barnicot, 2001, p. 88). Each of the skills were designed specifically to related to the development of purpose. More interestingly, one respondent in this course classification responded it is unimportant to “foster skills that align action with purpose” and “ability to persevere in spite of mistakes or obstacles”. Two of the three respondents answered positively to all six variables. Career-planning supports the *development of purpose*.

There were only two respondents who classified their course as other. As defined by Henscheid and Barnicot (2001), these courses tend to be the smallest and often enroll fewer than nine students. The results of this study show that of the two courses classified as other, one had fewer than 10 students and the other had fewer than 21. When answering the individual skills, the results were split on two of the skill variables. “Assist students on career choice” and “Improve ability of student to step outside of their comfort zone” each only had one responded who answered positively. In the other classification, neither respondent answered all six variables positively.

Department or Discipline based courses had more than half of the respondents answered positively in each of the *development of purpose* skill variables. The variable with the highest percentage was “Ability to persevere in spite of mistakes or obstacles” having 91%. The variable with the lowest percentage was “Assist students on career choice”. Although career choice stands out as an obvious predictor of development of purpose, the major focus of this type of course is to synthesis the learning within a particular major. This leads to the understanding that the goal of career choice may have already be major specific and not something that is needed at a capstone level. Fifty percent of the respondents ranked all six variables positively. The classification also has a high emphasis on the *development of purpose* in students.

When the skills for *development of integrity* are analyzed individually, interdisciplinary courses had high percentages in the six skill variables. The lowest at 50% asks the importance of “affirming values and beliefs”. When only looking at the respondents who answered positively to all variables, there is only 1 respondent (12.5%). Career-planning as a type of capstone had about 60% of all respondents reported skills that support *development of integrity* were important. However, when looking at all six variables there were no respondents in this classification. This type of capstone course assists students as they engage in pre-professional development (Henscheid & Barnicot, 2001, p. 88). Understanding this definition, the results suggested that this type of course *supports development of purpose* but did not support of the *development of integrity*.

Courses in the other classification “often span curricular and cocurricular boundaries and attempt to address institutional goals (Henscheid & Barnicot, 2001, p. 87). The goals are can be wide spread depending on the pedagogy of the particular capstone course. When compared individually, the variable results were split. Three of the variables were chosen by both

respondents and three of the variables only had one respondent answering positively. Looking at the six variables combined, the result is the same and split between the two respondents. As a result it is not possible to determine the support of integrity for this classification.

Although still higher than 50%, Department or discipline based courses overall had lower percentages for this area than for the development of integrity. Collectively, the results were also much lower for integrity than for purpose. Only one (2%) of the respondents answered positively to each of the six variables. The emphasis of this type of course does not support the *development of purpose*.

The second and third part of research question two asks “To what extent do capstone instructors use activities (both in and out of the class) that support the *development of purpose* and the *development of integrity*?” The study completed by Henscheid, J. M. (2000) found that “along with capping the academic major, they [capstones] are, secondarily, intended to prepare students for the world of work through classroom-based assignments and activities” (p. 48). The various formats and design of capstone syllabi made the review of activities in this study difficult. Many of the syllabi did not have defined activities or did not provide descriptions of the activities that were included as part of the course grade. A low percentage of activities were connected, by the research, with the *development of purpose* or *integrity*.

Research question three. Research question three stated “To what extent do capstone instructors utilize civic engagement pedagogy in capstone courses?” Of the 64 respondents to the survey 41% included civic engagement in their capstone course. Seventy percent of the Department based courses include civic engagement but only fifteen percent of the interdisciplinary courses include civic engagement. Both courses who marked the other category also said they include civic engagement in their courses. This is expected because most service

learning courses classify themselves as other because they believe service learning is a type of course in itself. “Service learning does appear higher on the list of instructional components of “other” courses than other types of courses” (Henschied, 2000, p. 134). Further, the examples in the survey for the “other” category were immersion and service learning but standard civic engagement pedagogies.

The extent to which civic engagement is incorporated in the course is further verified through the study. Nearly seventy percent of the faculty who include civic engagement in their course have specific learning outcomes for the engagement activity. Further, 88% assign a grade to the civic engagement activities associated with the course. The connection to learning outcomes and grades gives the civic engagement more validity and it becomes a focus of the courses overall learning.

The second and third part of research question three asks “Do courses with civic engagement (CE) pedagogy enhance the *development of purpose* and/or the *development of integrity*?” Based on the results of the skill questions for CE faculty, a strong majority (92%) answered that they feel purpose is either very or somewhat important. These In terms of integrity, more than 80% of the faculty felt these skill sets were very or somewhat important. Zlotkowski (1994) noted that “through service learning, students may be challenged to develop more fully their moral imaginations” (p. 105). Taken together, these findings present strong support of civic engagement as pedagogy.

Research question four. Research question four stated “To what extent do capstone instructors utilize reflection in capstone courses?” “One of the most important ways to enhance learning is to strengthen the link between the learning experience and the reflective activity which follows it” (Bourd, Keogh, & Walker, 1994, p.26). Sixty-four percent of the respondents

used reflection regularly as a learning tool in their capstone course. More than half of those faculty stated they always use reflection as a learning tool. Sixty-one percent of the faculty reported that the activities in their class included reflection and over half of the sixty-one percent say they always use reflection in their activities. This coincides with the results of research done by Jean Henscheid (2001) when she noted that undergraduates in most senior seminars and capstone courses are engaged in reflection inside the major and are preparing for the world of work.

The second and third part of research question four asks “Do courses that promote reflection enhance the *development of purpose* and/or *development of integrity*?” Reflection was shown to be a strong indicator of both the *development of purpose* and the *development of integrity*. Each of the questions regarding reflection were answered as either very important or somewhat important by more than 77% of the faculty. Offering student to clarify goals and enhancing cultural awareness both received a 100 percent response. Although still high, the development of integrity scored lower than the development of purpose. Two of the low areas were understanding personal and professional balance and awareness of civic responsibility. Not all of the respondents for reflection in the classroom were also respondents who practice civic engagement in the classroom which may have lead to the lower marks in that skill question.

Recommendations

Based upon the results of this dissertation research study, there are three major recommendations for practice and five major recommendations for future research.

Recommendation for practice. The first recommendation for practice is to provide faculty development or renewed awareness and increased attention to assessment in the areas of cognitive levels and student learning outcome development. This is an area that needs to be well

developed prior to introducing it to the faculty. A balance will need to be kept between faculty independence and guidance in course development. In order to encourage success, I would suggest using a foundation of Bloom's Taxonomy along with the results of some of the studies mentioned in this study. Kottke and Schuster (1990) suggests that [Bloom's Taxonomy] is one of the most widely accepted models of cognitive abilities and educational objectives used in education, and even its severest critics agree that the model has enormous influence and is an important step toward understanding the structure of learning outcomes. The structure of the Revised Taxonomy "provides a clear, concise visual representation" (Krathwohl, 2002) of the alignment between standards and educational goals, objectives, products, and activities.

In conjunction with the support in revisiting the construction of student learning outcomes, it is critical that the faculty who teach capstone courses understand the assessment process for not only their course but also their department, college, and university. By its very nature, the capstone course is a method of summative evaluation. It not only assesses previous cognitive learning in the major, but also provides a forum that allows an instructor to assess the student's overall collegiate learning experience (Moore, 2005, p. 2). Consistent and comprehensive assessment provides greater opportunity to structure the learning outcomes toward meeting the department outcomes. This assessment must be successive beginning with the student learning outcomes of courses take in the first year, also know as First Year Experience courses. By building on the levels of cognitive learning, it will be a natural progression to the highest level of cognitive learning outcomes by senior capstone.

The second recommendation suggests that WVU revise the standard template for faculty to use when submitting a capstone courses for faculty senate approval. First, there must be a consensus on the goals of capstone courses at WVU. I would suggest using the types of

capstones as a guide when determining the goal(s). For example, for each of the capstone types, the faculty senate could provide learning outcomes and then request that the instructor provide the learning objectives for their specific course. This would also be helpful in diversifying the type of capstones that are offered at WVU. Of the 64 respondents in the study, there were no courses classified as Transition which is “often the third most prevalent type of senior seminar or capstone” (Henschied & Barnicoat, 2001, p. 6). This is a very important type of course because it is helpful in preparing students for work, graduate school and life after college.

Understandably, these transition courses lend themselves very easily to assisting students with the *development of purpose*. Each capstone course should be required to submit activities and experiences they will utilize to meet the outcomes. This more standard review of capstone course will not only provide consistency, but will also allow more valid research to be done on our senior courses and their impact. Further, more specifically, WVU must revisit the current definition of Capstone Experience in order to more fully express the varying goals, instructional strategies, and topics that will be covered.

The third recommendation is to provide faculty with the opportunity to learn more about learning activities and experiences that support the higher cognitive levels of learning. Specifically, encourage faculty to use innovative teaching methods and activities that support the development of purpose and the development of integrity. As seen from the study results, civic engagement is a pedagogy that supports both purpose and integrity. Opportunities for faculty to learn about the various methods of integrating service into their courses would increase the likelihood of increasing diverse ways of learning. Development of integrity was the vector that was emphasized the least for all types of capstones in this study. However, more than 80% of the civic engagement faculty agreed that they promote skills that enhance integrity in their courses

regardless of the capstone type. “By emphasizing cooperation, democratic citizenship and moral responsibility through service learning, higher education connects to the wider community and enables students to contribute to the alleviation of society’s urgent needs” (Vogelgesang & Astin, 2000, p. 25). These development opportunities should be considered parallel to the development of curriculum throughout undergraduate and graduate education.

Recommendation for future research. The first recommendation is that more research should be conducted in first year courses. If the goal of a college capstone is to be the pinnacle of the undergraduate career, then it is critical that we have developed and designed matriculation of students to build on skills and knowledge levels early in their enrollment. In order to begin to design curriculum to meet these advancing needs, we must first explore in depth the expected learning goals of the First Year Experience. After, each level, sophomore and junior, should also be examined. Activities such as civic engagement pedagogy and reflection should be promoted beginning in the freshman year. It has been shown that each of these activities enhances and promotes the development of purpose and the development of integrity. The development of these two vectors early in the college career could result in higher retention of students who are undecided in major or otherwise are at risk. Results from this qualitative study added to the understanding of the University’s 2020 vision will give a solid foundation to begin to revise and enhance the undergraduate curriculum.

The second area that deserves further research is that of matching capstone models with disciplines in order to provide students with the most appropriate learning experience. A focus group style study of the student perceptions will validate the perceived needs each student has in terms of their final course taken at WVU. Not only will it be important to understand current seniors, but also taking time to understand recent alumni and how they would have benefited from

different types of capstone experiences. In his book, *The Senior Year Experience* (1999), John Gardner suggested the senior year is also the last opportunity to provide those basic competencies sought by virtually all employers yet, sadly, most neglected –particularly at some of our larger research institutions.

A third area of research will provide researchers with a basis for comparison of major research universities and the capstone experience. It is important to benchmark best practices of capstone programs in order to build a foundation for future improvements. Additionally, research into how capstone courses are translated into graduate programs will be another area on which to focus.

Finally, it is recommended that the department chairs be included in a follow up to the original survey. An important perspective that is missing is that of the department. A very low number of faculty reported that they were completely aware of the assessment that was taking place in their capstone course. Therefore, the chair of the departments may have goals or visions of the capstone that is not being translated to the faculty. This communication and assessment process must be clear and consistent to provide the appropriate improvements to course being offered in each discipline. This information could also lead to important conversations in the area of faculty tenure and gender differences in perception of developing purpose and integrity.

This study provided information on the impact undergraduate capstone courses have on the development of purpose and integrity (Chickering & Reisser, 1993, p 22-23). It explored the student learning outcomes and designed activities within the five major types of capstone courses. Results from the survey show that although some skills from both purpose and integrity are being supported in these courses, there is a need to enhance the proficiency of specific activities and pedagogies in the classroom to more fully promote both purpose and integrity.

Additionally, the results supported the argument that civic engagement and reflection play major roles in student learning and in turn the development of purpose and integrity.

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Appendix A

Does the syllabus identify the major course activities? _____

Course Subject Code _____

Course Title _____

Instructor _____

Activity	1 Purpose	1 Integrity
TOTAL:		

Appendix B

Elizabeth Dooley
 Associate Provost
 West Virginia University
 PO Box 6230
 Morgantown, WV 26505

Dear Dr. Dooley:

Thank you for your assistance in obtaining permission to collect data from your institution as part of my dissertation study, *Pinnacle of Undergraduate Education: Do Capstone Courses Support the Development of Purpose and Integrity?* The purpose of this letter is to inform you of the required steps involved in gaining written permission to conduct my pilot research study on your campus.

The purpose of my research study is to examine, by means of electronic survey, the capstone pedagogies across disciplines. In order to assure reliability and validity of my documentation review and survey analysis, I have chosen to pilot my study at your institution. Valuable information about student learning outcomes will be collected by requesting a copy of faculty capstone syllabi. The objective of my study is to advance the Understanding of how five different capstone pedagogies affect a student's development of purpose and integrity.

Specifically, I am writing to secure permission to separately survey 10 instructors on your campus that have taught a capstone course within the academic year 200908-201008. In addition, I would like to review course syllabi for the aforementioned capstones.

If you decide to allow your institution to participate, I ask that you forward me a letter of approval by **(insert date)**. For your convenience, I have enclosed a postage-paid envelope. Upon securing Institutional Review Board approval from WVU, I will send the email invitations to the selected pilot participants.

In closing, I want to reassure you that the results of this study will be used specifically for my dissertation and I will follow all IRB policies. Should you require additional information or have any questions, please feel free to contact me via telephone at (304) 680-7707 or via email at Kristi.wood@mail.wvu.edu.

Sincerely,

Kristi D. Wood-Turner
 Doctoral Candidate
 West Virginia University

Appendix C

Dear Participant,

This letter is a request for you to take part in a research project to assess how capstone course pedagogy affects student development at WVU. This project is being conducted by Kristi D. Wood-Turner, in the College of Human Resources and Education at WVU with supervision of Dr. Elizabeth Jones, professor in the College Human Resources and Education, for a Doctorate Degree in Educational Leadership Studies. Due to the specialized nature of capstone course instruction, our role in this research is critical. There continues to be a growing need for more formalized assessment and evaluation of the senior year experience and this research will provide a start to the investigation at WVU.

Your involvement in this project will be kept as confidential as legally possible. All data will be reported in the aggregate. Your participation is completely voluntary. You may skip any question that you do not wish to answer and you may discontinue at any time. Your faculty status will not be affected if you decide either not to participate or to withdraw. I am requesting that you also send a copy of our capstone syllabus. If you are not comfortable sharing this document, you do not have to participate in that portion of the study. West Virginia University's Institutional Review Board acknowledgement of this project is on file.

Your participation in this project is greatly appreciated and will take approximately 10 minutes to fill out via the email survey designed to collect course specific information. To participate, please follow the link and complete the survey questions.
<http://www.surveymonkey.com/s/LCBK9LR> In order to participate in the documentation review, please email a PDF copy of your syllabus to Kristi.wood@mail.wvu.edu. For this review, I will compile the most prominent student learning outcomes for capstone courses and report on the developmental impact of course activities.

I hope that you will participate in this research project, as it could be beneficial in understanding the impact of capstone pedagogy at WVU. I would be happy to provide you with a brief summary of the results at the completion of the research. Thank you very much for your time. Should you have any questions about this letter or the research project, please feel free to contact Kristi D. Wood-Turner, 304-680-7707 or by e-mail at Kristi.wood@mail.wvu.edu.

Thank you for your time and help with this project.

Sincerely,

Kristi D. Wood-Turner
Doctorial Candidate
Educational Leadership Studies

Capstone Pedagogy Survey

1. Demographics 1

As you review these questions, please respond in terms of the capstone course you are teaching this semester or have taught in the past.

1. What is your current rank or position?

Full-Time Professor

Instructor

Associate Professor

Lecturer

Assistant Professor

Graduate Teaching Assistant

Adjunct Professor

2. Are you tenured faculty at West Virginia University?

Yes

No

* 3. Are you teaching a capstone course?

If you are NOT teaching a capstone course, you do not need to continue with the survey. Thank you for your time.

Yes

Not sure if I teach a capstone

No

4. How many total semesters have you taught a capstone course at West Virginia University?

1

7

2

8

3

9

4

10

5

Beyond 10 semesters

6

5. For undergraduate students, the capstone course is:

Required for general education

Required for major

Counted as an elective

Other

Other (please specify)

Capstone Pedagogy Survey

**6. What is the subject code and number of your capstone course(s)? i.e. SRVL 495
(please list all courses you teach)**

1

2

3

Capstone Pedagogy Survey

2. Course Information

These answers pertain to the capstone course(s) you taught or are teaching at West Virginia University.

* **7. Please indicate which of the following types of capstone courses MOST CLOSELY describes your course.**

- Interdisciplinary capstone course - these courses offer students an opportunity to synthesize general education, major classes, and cocurricular learning.
- Discipline- or department-based - the overriding goal of is to summarize learning within the academic major. These types of classes are also likely to make connections between the academic learning and the professional world.
- Career planning course - assist students as they engage in pre-professional development. In some cases career planning is the only goal of these courses.
- Transition course - topics mainly consist of students' transition issues, and students enrolled in them are likely to engage in job search and life transition planning.
- Other - service-Learning and immersion are types of courses that would fit in "other".

8. How many credits are given for your capstone course(s)?

- | | |
|-------------------------|-------------------------|
| <input type="radio"/> 1 | <input type="radio"/> 5 |
| <input type="radio"/> 2 | <input type="radio"/> 6 |
| <input type="radio"/> 3 | <input type="radio"/> 7 |
| <input type="radio"/> 4 | <input type="radio"/> 8 |

9. What is your average class size?

- 0-10 students
- 11-21 students
- 22-31 students
- More than 31

10. Please mark all that apply:

- I created my own course syllabus.
- I created my own learning outcomes.
- My department uses the same syllabus for all capstone sections.
- I adapted the course content from guidelines given to me by my department.

Other (please specify)

Capstone Pedagogy Survey

3. Civic Engagement Pedagogy

Method of teaching that includes activities outside the classroom and/or for the good of the community. This includes volunteerism, service learning, internships/field placements, immersion, and community research, among others.

* **11. Is there a civic engagement component to your capstone course?**

Examples of civic engagement:

Service-Learning -learning experience set up by an academic professional and guided by a community partner to expose students to learning, reflecting and connecting the relationship between hands-on learning activities and classroom knowledge.

Immersion- involves significant student immersion in a community or public service that includes academic instruction, focusing on critical, reflective thinking as well as on the development of civic responsibility and/or personal growth of students.

Volunteerism

Shadowing

Internships

Community-Based Research-takes place in community settings and involves community members in the design and implementation of research projects.

Yes

No

Don't Know

12. If you do incorporate civic engagement in your course, do you have specific learning outcomes for the civic engagement portion of the class?

Yes

No

Capstone Pedagogy Survey

13. If you do incorporate civic engagement in your course, how much does it count toward students' course grade?

- Does not count at all
- Counts as a small part of the grade
- Counts as a moderate part of the grade
- Counts as substantial part of the grade

Capstone Pedagogy Survey

4. Student Learning

Please answer these questions about the capstone course you teach or taught.

14. How important are the following items in your capstone course? Determine importance based on design and goals of the capstone course you teach.

	Very Important	Moderately Important	Unimportant
a. Assist students on career choice.	jn	jn	jn
b. Provide students with the understanding of personal and professional balance.	jn	jn	jn
c. Offer students the opportunity to clarify goals.	jn	jn	jn
d. Provide cultural and/or social awareness.	jn	jn	jn
e. Foster skills that align action with purpose.	jn	jn	jn
f. Encourage students to affirm values and beliefs.	jn	jn	jn
g. Improve ability of student to step outside of their comfort zone.	jn	jn	jn
h. Enhance awareness of civic responsibility.	jn	jn	jn
i. Ability to persevere in spite of mistakes or obstacles.	jn	jn	jn
j. Assist students in defining their own positions while remaining open and tolerant.	jn	jn	jn

15. Please rate the accuracy of the following statements.

	Always	Often	Never
a. I use reflection as a learning tool in my capstone class.	jn	jn	jn
b. My activities in class include reflection.	jn	jn	jn
c. I expect my students to reflect outside of class time.	jn	jn	jn

16. In one phrase, describe the impact of your course (i.e., transition, synthesize learning, critical thinking).

Capstone Pedagogy Survey

17. Please note the extent to which you agree or disagree with the following statements about your capstone course.

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. I give my students class time to go out into the community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I specifically design activities that allow students to think about what they are learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. A portion of the grade in my class involves service (i.e. volunteering, service project, internship).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. My course gives students the opportunity to discuss personal beliefs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. I encourage my students to think about the ways they can give back to their community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. I require that my students look at learning from many points of view.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. It is important that my students learn through real world examples.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Reflection activities account for a portion of the overall grade.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. I use this course as an opportunity for my students to demonstrate skills associated with effective civic engagement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. I believe that reflection should be included in a capstone course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Capstone Pedagogy Survey

5. Student Development

The following items represent areas of student development.

18. Please note how frequently each of the following statements occur in your course.

	Often	Sometimes	Seldom	Never
a. Activities in my course help students clarify their personal interests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Students in my course often reflect on their personal values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. We often reflect on the student's journey through college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Activities in my course help students thoughtfully provide evidence to support assumptions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. My course uses community service as a tool to help students clarify goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. My course encourages students to challenge their personal beliefs through community involvement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Capstone Pedagogy Survey

6. Assessment

19. Mark all that apply

	Faculty	Students	Administration	Department	Don't Know	None
My course is evaluated by:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

20. If your department, unit, or college evaluates the casptone course(s), how is that information used?

21. Is your course tied to comprehensive institutional assessment?

Yes

No

Don't Know

Other (please specify)

Capstone Pedagogy Survey

7. Final Information

To put your answers in context, we'd like to gather some personal information from you. Of course, your answers will be held in the strictest confidence.

22. What is your gender?

Female

Male

23. With which race(s) do you identify?

American Indian

Asian

Black or African-American

Pacific Islander

White

Hispanic/Latino

Multiracial

24. If there is any clarification or additional information you would like to add about capstone courses, please do so below.

Thank you for taking time to assist in the study of capstone courses and student development.

Please remember to take a minute to email your course syllabus to the researcher at Kristi.wood@mail.wvu.edu if you have not already done so.

Your input is highly valued in the study.