Quality Enhancement Plan

The Synthesis Plan: Integrating the College Experience at Western Carolina University

"The first and most basic principle of an intelligent curriculum: it must equip young people to be lifelong learners."
—Edward Cornish, 1986

Introduction

Western Carolina University (Western) utilizes the metaphor of *synthesis* as the driving framework for encapsulating the way its faculty, students and staff undertake or support the teaching and learning enterprise. As part of this enterprise, Western seeks to provide the learner with ample opportunities to interact with an interdisciplinary framework to understand how theory relates to practice through specific in-class evaluations of case studies, open-ended or discovery-oriented design problems, and best/successful practices. Western believes this interactive and iterative learning process will equip students with the intellectual and experiential tools necessary to integrate the disparate components of their education into a unified experience. This way of learning will prepare students to transfer knowledge from one domain of application to another, to navigate and manage the social complexity of the real world, and to utilize technology as a means of mediating the needs of our society. This way of teaching will assure that Western students will develop the lifelong learning skills needed to cope with change and identify and capitalize on new opportunities long after the 'formal' educational experience is over.

Theoretical Background

Although the *Synthesis Plan* is loosely based upon Kolb's model (1994) of experiential learning, there are a variety of other models that have influenced this framework and those that have been developed nationally, examples include the constructivist learning model of Lawson (1989), Vygotsky's model as framed by Moll (1990), and the scaffolded knowledge integration (SKI) framework developed by Linn, (1995). Most pertinent to Western's *Synthesis Plan*, Kolb's framework organizes those instructional activities that best promote synthetic learning into four areas: reflective observation, active experimentation, concrete experience, and abstract conceptualization (Kolb, 1984; Svinicki & Dixon, 1990). Kolb's model of experiential learning is very appropriate for educators who see themselves as helping to prepare students for lifelong learning. It also values a learner-centered approach to assessment that is contextual or goal driven so the educator can accommodate the unique needs, goals and learning styles of the student.

In addition, Western's Synthesis Plan recognizes the need to facilitate interdisciplinarity as a principle means of encouraging synthesis. Klein (1990) defines interdisciplinarity as the primary vehicle for promoting new levels of discourse and integrating knowledge within the curriculum. Interdisciplinary dialogue is a process that aids the learner in achieving an integrative synthesis. This dialogical process begins with a problem, question, or issue, but attempts to move the learner toward solving the problem(s)

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and answering complex questions. Klein (1990, p. 55) also notes that interdisciplinary learning is described by the form or structure it takes (e.g., team-teaching or co-curricular/curricular program strategies), the overriding motivation (e.g., to serve cultural, societal, intellectual or employment-sector needs), the nature of interrelatedness (e.g., statistics is taught *in the service of* psychology), or by labeling the level of integration (e.g., from *borrowing* to *synthesis).* It is important to note that the mere presence of individuals from different disciplines does not signify interdisciplinary collaboration but denotes a multidisciplinary framework for discussion. Multidisciplinary work stems from a process that simply juxtaposes two or more disciplines and is additive, not integrative. In these instances, the disciplinary perspectives are not changed and are only contrasted. The term *interdisciplinary,* as applied to synthesis of learning, is defined as a process whereby students and instructors engage one another and the disciplines that may impact or inform the issue and analyze these differences with the goal of solving the given problem or issue. It results in integrated learning in its most basic and advanced forms and fosters the development of intentional students—students who are motivated, self-directed, and active participants in their own learning (source?).

Integrated Learning and the Intentional Student

Too many college students fail to integrate their individual collegiate experiences into a context that leads to understanding, personal meaning, direction, and ultimately a career. At least anecdotally, the students who appear incapable of synthesizing their experience also tend to view their courses and co-curricular experiences as isolated events that are either to be endured or enjoyed as separate and unrelated activities. Therefore, more curricular frameworks should focus on pedagogical strategies or other alternate instructional techniques that foster the integration of the broader learning experience within the context of application and societal factors – academic and co-curricular experiences need to interact with real-life experiences.

The development of the Quality Enhancement Plan (QEP) at Western Carolina University incorporated important research conducted for *Greater Expectations: A New Vision for Learning as a Nation Goes to College* (AACU, 2002) and *Learning Reconsidered: A Campus-wide Focus on the Student Experience* (ACPA/NASPA, 2004). *Greater Expectations* highlights the changing landscape of the American work place – more global in nature, more reliant on "creative problem-solving, team work, and adaptability," and heavily dependent on high-level intellectual skills, such as evaluation, synthesis, and analysis, and technological prowess. In like vein, colleges and universities are also undergoing a metamorphosis as they try to meet their rapidly multiplying missions in an increasingly complicated society. *Greater Expectations* outlines existing barriers to meeting the goals of higher education in the 21st Century and proposes important recommendations to meet those goals. In this monograph, the authors urge institutions of higher education to develop specific objectives for student learning that are the result of aligning academic major and general education objectives and desired outcomes. The objectives and outcomes should reflect ongoing results of assessing student learning, incorporate research on learning, and increase the level of student achievement in college courses. College curricula should include attention to developing student knowledge as well as intellectual capacities cumulatively and sequentially, while incorporating all types of courses (e.g., general education, the major, electives) and co-curricular experiences (e.g., internships and service learning).

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Compounding an already complicated scenario for institutions of higher education (IHEs) as they refine their role in educating students are the desired outcomes and expectations for higher education that are desired by different constituents. High school and college students rely on completing a curriculum that will prepare them for a career and advancement within that career. Employers expect to hire employees who are trained for jobs and able to "perform consistently well, communicate effectively, think academically, help solve problems, work collegially in diverse teams, and use relevant skills of the profession" (AACU, 2002). Policymakers are interested in meeting local and regional needs for economic development and the workforce. Faculty members expect students to be active learners in their educational journey, to achieve greater intellectual understanding, and to master knowledge specific to their disciplines. They also expect students to be effective communicators and active contributors to society. *Greater Expectations* discusses the "misalignment of high school work with college entry expectations," including the lack of any formal or informal exposition of why college-bound high school students should be prepared for the interactive or holistic approach to higher education. Furthermore, this disconnect is often repeated in college: students typically complete a list of courses while making no connection between the courses and participate in extracurricular activities that shed little or no light on the importance of an integrated college experience. This lack of coherence in curricula and programs is underscored by the "absence of a plan for corrected learning," so that students often matriculate without connecting the dots or understanding the relationships that exist between all aspects of their college experience. *Learning Reconsidered* also makes the case for restructuring institutions of higher education based on how students learn, departing from the compartmentalized models prevalent today. It emphasizes the need for a new approach to enhancing student learning, one that is informed by a demographically diverse student body, driven by research findings, and responsive to societal changes—one that results in "an integrated, comprehensive vision of learning as a transformative process…centered in and responsive to the whole student" (p. 30).

Learning Reconsidered calls for

> the integrated use of all higher education's resources in the education and preparation of the whole student. *Learning Reconsidered* is also an introduction to new ways of understanding and supporting learning and development as intertwined, inseparable elements of the student experience. It advocates for transformative education—a holistic process of learning that places the student at the center of the learning experience" (p. 3).

In much the same way that *Greater Expectations* redefines student learning to encompass the integration and synthesis of information and not just the acquisition of facts, *Learning Reconsidered* advocates a broader application of instruction—one that includes academic instruction as well as personal development and learning beyond the classroom. "Learning is a complex, holistic, multi-centric activity that occurs throughout and across the college experience" (p. 8). Our current organizational structure for ensuring or managing student learning could be improved with a greater focus on better connecting the learning domains of liberal studies, major courses, and electives. The Quality Enhancement Plan at Western promotes the development of an educational plan that helps students to link these

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domains, as well as others, so that they complete their studies with an education that is more student centered, relevant to the 21st Century, and lays the groundwork for life long learning.

QEP LEARNING OUTCOMES

The QEP at Western proposes the development of intentional learners – purposeful and self-directed, engaged in their own learning, goal- and process-oriented, with a strongly developed self-awareness. "Intentional learners are integrative thinkers who can see connections in seeming disparate information and draw on a wide range of knowledge to make decisions…for intentional learners, intellectual study connects to personal life, formal education to work, and knowledge to social responsibility" (AACU, 2002). *Learning Reconsidered* defines learning as "a comprehensive, holistic, transformative activity that integrates academic learning and student development, processes that have often been considered separate, and even independent of each other" (p. 18).

In developing a plan to enhance student learning at Western relative to the aforementioned values, the university community provided valuable feedback to the Quality Enhancement Plan Committee that resulted in a focus on the broader interpretations of learning—the application of knowledge referred to as synthesis in Bloom's Taxonomy. The increasing importance of analysis and integration [synthesis] of the collegiate experience by students is understood as critical if successful learning at the college level is to be fully realized. Factual recall and the acquisition of facts are relevant dimensions of learning, but the interpretation and synthesis of information are critical for advanced academic progress and success in the modern workplace and society.

In implementing Western's notion of *synthesis*, the committee aligned key learning objectives with those articulated in Western's mission and Liberal Studies program. Hence, our key learning objectives are not something new but, rather, are objectives more fully elaborated by reviewing how other institutions define these goals and using Bloom's Taxonomy of Educational Objectives in the Cognitive and Affective domains. In undertaking this task, we also recognized that we had to note specific caveats to ensure we circumvent possible critiques of this effort and make our assumptions transparent. Before stating the caveats, it is important to keep in mind that the principal goal of the QEP is to focus efforts in helping the University to fulfill its mission as related to student learning. The QEP should also build upon and replicate successful efforts already in place. These goals include supporting and complementing the efforts of Liberal Studies and the variety of academic programs in their ongoing efforts and providing the impetus to systematically enhance and assess these activities. In achieving these goals, the committee wanted to make the following caveats (assumptions?) explicit:

1. Any set of learning objectives will be insufficient for detailing the complete educational experience and the specific focus of disciplines or professional accrediting bodies.
2. The various manifestations of Western's learning goals as articulated in our mission, Liberal Studies Program, disciplinary and professional standards, and the QEP should be complementary and integrated where possible, but

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will vary in relevance by the educational context and the specific goals of the QEP as driven by the implementation plan.

3. The QEP has a limited scope and will focus on a subset of learning goals, recognizing that Liberal Studies and the academic programs have a role in *implementing* and *assessing* these and related student learning goals.
4. There is a symbiotic relationship between cognitive, affective and work-skills learning; the lines of demarcation between and within these domains are not always clear.
5. Students require practice in the application of the skills they learn; the affective and social elements of a learner will impact his or her efficacy individually, as part of a team or in translating these skills to the workplace.
6. There has been a significant shift in structure of learning activities to support a career-oriented approach to learning that addresses regional economic, social and workforce disparities in the region and State. As such, our learning objectives are infused with an emphasis on improved pedagogy and applied experiences.

These aforementioned emphases (and caveats) have led to the following distillation of primary learning objectives to inform instruction in the QEP. The objectives are as follows:

Student Engagement with Learning and Knowledge

- **Information Literacy**
- **Creative Problem Solving**
- **Critical Inquiry**

Student Engagement with Society and the Community

- **Leadership & Participation (*includes Civic Engagement)**
- **Informed Decision-making**
- **Diversity Awareness**

Western's QEP and related outcomes are designed not only to foster learning but also to enable students to apply what is learned. We will provide *developmental expectations* and a *rubric* to guide assessment in the Implementation Section. By the time students enter the workforce or graduate/professional studies, we expect them to be able to demonstrate substantial content proficiency as it pertains to their major field of study, think critically and constructively, communicate verbally and in writing at an advanced level, and engage others through service and leadership.

The Synthesis Plan

Typically, the "synthesis experience" at many universities consists of two principal types. The first type of synthesis experience (also known as the culminating experience) supports the implementation of a senior experience that resides within the major area. Students will often complete a senior thesis, capstone project, senior seminar, or internship to fulfill these requirements. Assessment techniques vary, but usually there is a group work requirement, a presentation and a paper or project that is graded by more than one reviewer.

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These experiences attempt to bring together the student's accomplishments and learning within and outside the major. It also assists students with the transition from the undergraduate experience to graduate or professional school and/or a career path. These experiences are usually focused on the discipline and the approach to learning and, therefore, the related assessment techniques vary greatly.

The second type of synthesis experience has several derivations of essentially the first model; its most common form of expression is the freshman and sophomore seminar or, less well known, the senior synthesis experience. Although the freshman (and sophomore) seminar experiences differ at most colleges and universities, they typically involve very small classes and personal mentoring by a senior faculty member who is an active scholar. The experience usually consists of residential learning communities of first-year students tied to academic concerns or a particular academic theme (i.e., race and class, ways of knowing, etc.). These seminars provide close personal contact with a senior faculty member with the goal of helping students develop a sense of belonging to their new academic community and attempt to foster the intellectual skills, self-confidence and self-efficacy necessary for subsequent academic success. The instructional format usually is small and encourages active modes of learning that may include applied or experiential learning opportunities, discussion of ideas, research on special projects, career exploration, fieldwork, library investigation, etc. The senior synthesis is rarer, but usually functions as a university-wide, non-departmental course that is multidisciplinary in nature, i.e., the topic is viewed from the perspectives of two or more disciplines/perspectives. An example rationale for developing such a course is well stated in Indiana University of Pennsylvania's Report of the General Education Task Force (1987).

> "Two ideas motivate the proposal of this course. First, there is a theoretical consideration…The university does a good job teaching students to think analytically; that is, students become adept at taking things apart and studying them in terms of structure and function. Indeed, the increasing separation of faculty and students into discipline-specific departments is testimony to our tendency to think this way. There is, however, a complementary intellectual process called synthesis. Synthesis is the way in which well understood parts are combined into wholes; it is the capacity to weave many complex strands into a fabric, either recreating a pattern already known or imagining and designing new ones. Synthesis is an essential skill which contributes to our capacity to think effectively about the complex intellectual, social and political issues of the world. Hence, we want to place students in a course specifically designed to confront broad topics from multiple perspectives. A second consideration for our proposal is structural. We believe that a solid, meaningful program of Liberal Studies should not be confined to introductory courses located in students' first and second years; rather, it should spread across and enrich all four years of study. Certain kinds of learning-especially learning of a synthetic nature-demand a maturity which beginning students do not have. Hence, we wish to create a course specifically designed for students nearing the end of their university education."

So, with this context, Western believes there is a challenge that exists in higher education as it pertains to "life or career-based education" – in particular, how can an institution of higher education build upon these well established pedagogical strategies and help students intentionally integrate their exploration of life and career-based choices? The student may be exploring these topics at various developmental points (freshman, sophomore, junior, senior), but this exploration is often disjointed and the student may make little effort to coordinate these topics between the curricular, residential, career services, and

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advising functions. Moreover, the opportunities to 'study the major' from multiple perspectives as the student explores career possibilities could be enhanced. Occasionally, a professional program such as engineering takes this on through a freshman seminar for students majoring in engineering.

Western contends it can add to these frameworks and fulfill its goals as stated in its mission by maintaining the aims of its liberal studies program through its many manifestations on campus while bringing to light the career element, infusing it intentionally and systematically within the broader curricular and co-curricular frame. The QEP will function as the conduit for undertaking such a task. Western's "Synthesis Plan" helps frame this endeavor and will assist students, staff and faculty to form a conceptual whole that will integrate academics, residential-life, service and leadership, and personal and work-related goals and activities. Although "Synthesis" is directly related to the major, it begins as soon as students enroll at Western. Entering freshmen will investigate their interests and aptitudes to help them narrow career choices. As they decide upon a career, they are helped to identify a major consistent with their interests and abilities. During this exploration period, students immediately begin the work of integrating their collegiate experiences through the mentoring and assessment mechanisms attached to orientation, advising, and other early experiences. Contextually appropriate assessment measures will be encouraged to help connect students' applied experiences (service-learning, community-based research, internships) and career or educational aspirations. The ultimate outcome for Western's students will be a deeper understanding of their discipline, a better sense of purpose, and a clear career and/or future educational path. Thus, the Synthesis Plan is the vehicle by which Western can guide and inform the University's pedagogical and instructional formats. We can collectively meet the needs of our students and contribute to the workforce, intellectual and societal needs of the region and nation.

Conclusion

The student's ability to synthesize and to create a personally meaningful conceptual framework will begin to develop upon enrolling at the university. Our plan calls for a pilot project in which entering undergraduates (first-year and early transfer students) investigate their interests and aptitudes to refine educational and career choices. As they consider possible careers, they are helped to identify a major consistent with their interests and abilities. During this exploration period, students learn how to form a conceptual framework in which to integrate all of their collegiate experiences. In our plan's pilot project, students will demonstrate how they are integrating their experiences into a coherent whole. Faculty participating in this concept will design courses (Liberal Studies or major) to facilitate students' integration of coursework with his or her conceptual framework. A potential pilot project could model an integration of student development through service learning, applied learning, internships, and co-operative education experiences. The ultimate outcome for Western's students will be a deeper understanding of their discipline, a better sense of purpose, and a clearer career path.

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