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Fostering Microenvironments for Teaching and Learning: Findings of a Study of Program Quality in Honors Programs

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INTRODUCTION

Honors education has long enjoyed a reputation for adding something unique to undergraduate education, and the advantages are touted widely, but there has been limited examination of quality in undergraduate honors education. Previous efforts have typically stopped short of considering program quality as it relates to student learning. Instead, program administrators and other researchers have examined the topic from the perspective of a single stakeholder group, focusing primarily upon student satisfaction or administrative concerns, such as enrollment management or program development. To be sure, these are important considerations—but it is becoming even more critical for stakeholders in honors education to communicate the efficacy of honors programs and the resources necessary to develop and support a high-quality program. Present economic conditions in the United States have constrained college and university budgets, challenging all programs to do more with less. In addition, because resources for undergraduate honors education are allocated to a relatively small number of students, some critics argue that this is unfair because these students are already advantaged by secondary and higher education systems. These critics (Sperber, 2000) charge that generous scholarships awarded to honors students regardless of financial need would better serve regular undergraduates who demonstrate financial need. The types of experiences designed for honors students can also be costly, especially smaller classes or residential programs. Students, faculty and administrators need to know more about the attributes of high-quality honors programs in order to respond to these critics and make informed decisions about the appropriation of funding, faculty time, campus space, and related resources.

The purpose of this study was to develop an original theory of high-quality undergraduate honors programs, i.e., an ideal type, in order to advance our knowledge and understanding of undergraduate honors education, and ultimately, to improve undergraduate teaching and learning.

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[1] Material for this article was drawn from the dissertation *A Grounded Theory of High-Quality Undergraduate Honors Programs* (Author, 2003).

This, in turn, will provide students, faculty, and administrators with a foundation upon which they can thoughtfully reexamine their expectations of honors education, assess their own programs, better align resources and evaluation tools, and, if warranted, create an agenda for change.

For the purpose of this study[1], high-quality honors programs were defined as those programs that "contribute to enriching learning experiences for students that have positive effects on their growth and development" (Haworth and Conrad, 1997, p. 15). Haworth and Conrad developed this definition after extensive review and synthesis of the literature on academic program quality and in preparation for their comprehensive study of program quality in master's degree programs. The definition was selected for use in this study because it emphasizes both student learning and development and accommodates the diversity of honors program types.

Developing a theory of high-quality undergraduate honors programs was accomplished by inviting and examining the perspectives of students, faculty and administrators in four honors programs at two large, public doctoral/research universities (based upon Carnegie Classification 2000 edition) in two states located in the Midwest. The following question guided all aspects of the research process: "What are the attributes of a high-quality honors program?" Drawing upon and extending the work of Haworth and Conrad (p. 22), three sub-questions were considered throughout the study to enhance the identification of program attributes. First, what steps or actions do stakeholders take to implement or enact the attribute? Second, in what ways do these actions enhance students' learning experiences? Third, what positive effects, or outcomes, do these learning experiences have on students' growth and development?

BACKGROUND

Despite the prominence accorded undergraduate honors education in the literature advertising colleges and universities, there is a paucity of scholarly attention. A considerable amount of attention is given to K-12 programs for "talented and gifted" students but there is relatively little mention of programs and related opportunities for high-ability students in higher education. A significant source of publications remains the National Collegiate Honors Council, including this journal and the numerous monographs designed for practitioners, addressing topics related to program design, delivery, and evaluation (for example, Reihman, et. al., 1990). Major areas of evaluation include recruitment, attrition, and course satisfaction. Braid and Long's monograph Place as Text: Approaches to Active Learning (2000) offers a comprehensive review of the National Honors Semester initiative of the National Collegiate Honors Council and describes various models for active learning. The NCHC has also published lists of essential components of honors programs and expected outcomes (Fuiks and Clark, 2000, p. 3) drawn from previous work in related areas of research and the observations and experiences of faculty and administrators who participate in honors education. Finally, Peterson's Honors Programs (Digby, 1997) offers an encyclopedic guide to honors programs in the United States and England. While these publications offer a rich source of information, they are largely descriptive, rather than the product of original research.

A second, and also growing, area represented in the literature is honors education at community colleges (for example, Schuyler, 1999 and Outcalt, 1999). A third area includes essays and commentaries on undergraduate honors education and descriptions of specific program models (Austin, 1986; Friedman and Jenkins-Friedman, 1986; Robinson, 1997). This area also includes research on personality traits, characteristics, and learning needs of honors students (Ender, 2000). Two dissertations (Capuana, 1993 and Dehart, 1993) present case studies of honors programs and provide comparisons between programs. Related to this group is a body of literature representing specialized combined degree programs for honors students, including but not limited to Baccalaureate-M.D. degree programs (Arnold, 2000; Albanese, VanEyck, Huggett, and Barnet, 1997; Epstein et al., 1994) and co-terminal bachelor's and master's degree programs (Robinson, 1997).

While the body of literature specific to honors education is still expanding, this study intersects with many important topics in higher education, including student development, collaborative learning, problem based learning, learning communities, student recruitment, student and faculty satisfaction, curricular quality and innovation and program quality. Of this list, two areas in particular—student development and program quality—merit attention here.

The literature on student development theory augments our understanding of honors education because theories of student development offer insight into the ways in which students, including those who participate in honors programs, develop identity, adjust to college life, adopt new skills to foster learning, create meaning about new experiences, set goals, persist, and succeed in college. Previous research has illustrated the connections between student development and learning and these connections are essential to understanding the attributes of high-quality honors programs.

Chickering's (1969) seminal work on the theory of identity development, later revised (Chickering and Reiser, 1993), describes seven vectors that characterize students' psycho-social development during college: developing competence, managing emotions, moving through autonomy toward interdependence, establishing identity, developing interpersonal relationships, developing purpose, and developing integrity. Chickering also offers recommendations for fostering positive development, such as providing a curriculum that invites diverse perspectives and opportunities for students to interact with faculty.

Related to perspectives on identity formation are views on self-efficacy and self-concept. Self-efficacy theory (Bandura, 1977) addresses students' beliefs in their abilities to accomplish tasks. Self-concept (Pascarella and Terenzini, 1991) is a personal measure of ability or competence in comparison with others. These theories, along with other perspectives on "self," explore beliefs that contribute to students' academic performance and their relationship to other factors such as the learning environment.

Research on learning environments has examined the significance of factors such as student organizations, student activities, residence halls, class size, student-teacher interaction and student-student interaction (Silverman and Casazza, 2000). Astin (1993) identified 190 institutional characteristics, analyzed their influence on

student development, and found that learning and student success are positively related to involvement in college. Pascarella and Terenzini (1991) and others have investigated student involvement in organizations and extracurricular activities and found positive effects on the development of self-concept and educational persistence. Haworth and Conrad (1997) developed a theory of program quality that is predicated upon the mutual engagement of students, faculty and administrators. Their research identified five clusters of program attributes that contribute positively to student growth and development. The five clusters are: diverse and engaged participants, participatory cultures, interactive teaching, connected program requirements, and adequate resources (p. 28). Mentoring, an aspect of interactive teaching, has received considerable attention in the literature, including longitudinal research by Astin (1993) that indicates mentoring contributes to students' satisfaction with the college experience.

The studies described above, along with others, represent a growing body of evidence supporting claims that student-student and student-faculty engagement enhance student growth and development. These have enlarged our understanding of student success and offer a foundation for examining the attributes of high-quality undergraduate honors programs.

The literature on academic quality is diverse and includes a number of literature reviews—but only a handful of empirical studies have helped to fill the gap in our understanding of academic program quality as experienced by program stakeholders or participants. The majority of these studies examine measurable characteristics of departments or programs that are correlated with programs perceived as high-quality programs. Contributing to this vein of research are reputational rankings and objective indicator rankings completed by faculty members identified by researchers as experts who presumably possess knowledge of programs and departments beyond their own (Webster, 1986).

Support is growing for a perspective on quality that is both multidimensional and multilevel. This perspective (Conrad and Blackburn, 1985; Fairweather and Brown, 1991) holds that quality is a function of the complex interplay of factors across multiple dimensions and levels (e.g., program and institutional levels). Instead of accepting the traditional views of quality, Astin (1985) suggested that institutions should focus on an approach to excellence that he calls "talent development." Put simply, he asserts that colleges and universities should view quality as the development of students' talent. Nordvall and Braxton (1996) criticized the traditional approaches (reputational, resources, and value-added) for defining quality in undergraduate higher education and introduced an alternative definition of academic quality. They posited that quality is dependent upon the alignment of the goals for instruction, the level of student ability and the level of understanding of course content.

Building upon the recognition that program quality cannot be evaluated by examining a single dimension, and coupled with a growing belief that quality is linked to both environment and experience, recent efforts to understand academic program quality have engaged multiple approaches to inquiry to better explain this phenomenon. In order to develop a theory of high-quality master's degree programs, Haworth and Conrad (1997) engaged qualitative research methods to systematically

collect data from program stakeholders and identify attributes of high-quality programs that are linked specifically to student learning experiences and positively affect students' growth and development. Donald and Denison (2001) also articulated a need for additional research that incorporates the perspectives of multiple stakeholders in higher education. They conducted a study that examined students' perceptions of criteria for student quality and concluded that students' perceptions of quality are more closely aligned with Astin's theory of talent development rather than with traditional input or resource perspectives on quality.

As this review of the literature reveals, there is still much work to do to augment our understanding of academic program quality as experienced by program stakeholders or participants. Bogue and Saunders, writing in the preface to The Evidence for Quality (1992), remind us that many of the experiences and outcomes of a college education cannot be measured precisely and pose this question: "Where is the instrument powerful and sensitive enough to translate every beautiful moment into numbers?" (p. xiv). Their question, while admittedly powerful as a rhetorical device, also offers a challenge to those who wish to study academic program quality.

RESEARCH METHOD

In keeping with the intention to learn from stakeholders and understand how they interpret and assign meaning to their experiences with honors education, and consonant with the goal of *developing* a grounded theory (Glaser and Strauss, 1967) of quality in honors education, this study was designed and conducted following the principles of qualitative research. This section will provide an overview of the research method used in this study, and additional information may be found in the technical appendix.

THE STUDY DESIGN

While it would have been easier logistically to consider just one honors program at a particular institution, a multisubject, multisite design was selected to reflect the broad array of programs and experiences under the rubric of honors education. This design also allows for the consideration of a greater number and range of data sources, and contributes to the transferability and generalizability of findings (Bogdan and Biklen, 1998, p. 63), should further study occur. However, the design of this study could not possibly embrace all of the variations in program design or institutional characteristics, and there is a need for future research to address these considerations.

In order to enhance heterogeneity (substantive representativeness) at the institutional level, four cases (honors programs) were selected at two public, research/doctoral universities in two states located in the Midwest. The four cases, and the reasons for their selection, are described in the next section. The programs were *not* selected for perceived reputations or any such identification as high-quality programs. Readers will note that all participants in the study were assured of the confidentiality of their responses according to human subjects/IRB guidelines. As an additional measure of confidentiality, especially in consideration of the small size of some

programs and their staff, and the frank and sensitive nature of some discussions, pseudonyms were assigned to each program and institution and are used in reporting the findings of this study.

THE FOUR CASES (PROGRAMS)

Case One:

Case one is a small honors program located in a school of business and was selected because it offered the opportunity to examine honors education in a professional school. This case will be referred to as the Honors Program in the School of Business at Midwest University. Approximately 40 students participate in this honors program each year. Promotional literature for this program indicates it "seeks to provide high-potential students special opportunities for academic challenge, social interaction, and career development." The most significant benefit of this program, as described in program literature, is the "opportunity to work closely with students and faculty who love to learn." Students may enroll in honors courses or undertake "individually tailored research projects where students work closely with other high-potential students and faculty members."

Case Two:

Case two is a large honors program in a college of letters and science and is the largest honors program at this particular university. This case will be referred to as the Honors Program in the College of Letters and Science at Midwest University. Approximately 1,000-1,400 students participate in this honors program each year. This case was selected because the program enrolls a large and diverse number of students who may elect to pursue honors recognition in the liberal arts, in the major, or both (comprehensive honors). Promotional literature about the program includes this statement describing the program's goals:

> By bringing students and professors closer together in small classes and individual research settings, the Honors Program fosters a feeling of community even as students push themselves to explore the very frontiers of knowledge.

According to program literature, students who wish to earn honors in the liberal arts must complete at least 24 honors credits "in broadly distributed subjects ranging from the humanities to the social and natural sciences." Students seeking honors in the major apply to their major department and follow department-specific requirements. Candidates for honors in the major also write an original research thesis or complete a culminating project as directed by the department.

This program is known for its extensive array of research and social opportunities. Students in the program are encouraged to apply for residence in the university's residential college, but this particular residence hall is not organized under the auspices of the honors program and honors students are not guaranteed a place in the residential college.

Case Three:

Case three is a mid-size honors program in a college of agricultural and life sciences. This case will be referred to as the Honors Program in the College of Agricultural and Life Sciences at Midwest University. Approximately 150-200 students participate in this honors program each year. Promotional material about the program explains the program is for students who seek the following:

> *A challenging and intellectually rewarding undergraduate experience . . .the program has the flexibility to meet the unique needs of each student, challenge the mind of the independent thinker, and stimulate the curiosity needed for continued learning.*

This program was selected because in addition to offering honors in the major (with some exceptions), it also offers options for honors in research and individualized honors. All students are required to write a senior honors thesis and present the results at the college's annual research forum.

Case Four:

Case four is an honors college open to students in virtually every department. This case will be referred to as the Honors College at Central Midwest State University. This honors college advertises flexibility and freedom for students to design their course of study, including a mix of honors and non-honors courses. Program documents provide this description of the academic environment and experiences:

> *Honors courses and sections . . . are much smaller than their non-honors counterparts. Material is usually covered in greater depth, and there is more classroom interaction in general. The pace is faster and more challenging, since students are surrounded by other students of the same caliber, and, often, the same interests.*

This honors college is described as an "umbrella" and students are allowed to select any major, complete two majors, or complete two degrees. The honors college does not require a senior thesis but some departments have thesis requirements. Honors students may elect to pursue independent study or research that may contribute to a senior honors thesis. In addition, this program includes a residential component. Honors students are invited to live on an honors floor in one of five residence halls and rooms are assigned on a first-come, first-serve basis.

SAMPLING

Theoretical sampling (Strauss and Corbin, 1990, p. 183) was engaged as an overall strategy for the selection of participants and provided flexibility in meeting the needs of developing the theory. Program directors were queried for their suggestions and access to names of junior and senior students enrolled in honors programs and faculty members who currently teach honors courses or have taught honors courses within the past two years. Senior students were the primary focus (among students) because of the likelihood that they had enrolled in a greater number of

honors courses and participated in a greater number of honors activities. Likewise, they were more familiar with non-honors courses and had encountered a greater number of experiences as college students. After establishing contact with an initial group of participants, the researcher expanded the number of participants by employing snowball sampling (see Bogdan and Biklen, 1998). Using this strategy, the researcher asks participants for the names of additional individuals whose participation could contribute to the emerging theory.

DATA SOURCES AND PROCEDURES

The primary sources of data were interview transcripts and documentary evidence. On-site interviews (n=58) were conducted with students, faculty, and administrators in the four honors programs between February 2002 and June 2002. The final number of participants was 58, and the distribution included 6 program administrators, 19 faculty and 33 students. Additional information about the distribution of participants may be found in the technical appendix. Each interview was approximately 60 to 90 minutes long. The interviews were conducted as dialogues and questions were primarily open-ended, with probes for clarification. The discussion and questions were guided by topics selected to address the research question ("What are the attributes of a high-quality honors program?") and three sub-questions, but they were not used as a formal interview protocol. When prompting was required, the interviewer posed questions such as "Where did the real learning occur in this program?" or "What do you think has been the most valuable aspect of this program?" With only one exception, each interview was audio recorded and transcribed to provide an accurate and enduring record of the interview. Additional sources of data included documents produced by honors programs for current students and faculty members, documents produced by universities for prospective students, and web sites designed for current and prospective students. The researcher's personal field notes, including observations, reflections, descriptive notes and analytical memos, were yet another source of data.

DATA ANALYSIS

Data collection and analysis occurred simultaneously and continued for the duration of the study. Prior to beginning data analysis, decision rules were established to enable the systematic identification of the attributes. First, each attribute had to be considered important by participants in at least three of the four programs (preferably all four) in the sample, and second, each attribute had to be considered important by participants in at least two of the three participant groups in the sample.

The process of data analysis followed the four stages of the constant comparative method (Glaser and Strauss, 1967; Conrad, 1982) and these are described in greater detail in the technical appendix. In the first stage, the researcher read the transcripts from the 57 interviews that had been audio recorded and the notes from the single interview that was not recorded. Program documents and field notes were also reviewed at this time. Following the decision rules established earlier, data incidents (e.g., references such as "welcoming environment" or "faculty champion") that

occurred in multiple programs or across multiple participant groups were recorded. This was accomplished by reviewing incidents at the program level and also at the participant group level. Incidents where interviewees mentioned attributes of high-quality programs that they believed were *absent* from their program were also recorded. As the researcher proceeded with this preliminary round of coding, data were coded into categories aligned with the research question and three sub-questions: attribute, actions taken to enact the attribute, barriers to enacting the attribute, consequences for learning experiences and the effects on students' growth and development. At the conclusion of this stage of data analysis, nineteen attributes of high-quality undergraduate honors programs were tentatively identified.

In the second stage of data analysis, the researcher returned to the code file and the interview data and searched for evidence to support or disprove the preliminary list of attributes. Evidence was sought to refine the original attribute or even discover a new attribute that might have been missed during the initial stage of data analysis. During this second stage the researcher also began to examine the data, across programs and participant groups, to glean additional details about the attributes and the actions, consequences and effects that shaped them. Through careful review and constant comparison of the data incidents, a rough theory of program quality was developed. After refining the list and discovering areas of overlap between two or more attributes, the initial list of nineteen attributes was trimmed to twelve. The names of some of the attributes were altered at this point so that they would provide a more accurate description of the functions they performed.

In the third stage of data analysis, the theory was delimited and tested by reviewing the code file and examining the "fit" between the data and the emerging theory. When the researcher was no longer able to find additional data incidents to support or refute the emerging theory, the requirements of "theoretical saturation" (an explanation is provided in the technical appendix) were satisfied and the twelve attributes were grouped into three thematic areas, or clusters. Finally, a summary of the theory was developed, including descriptions of the actions taken by program participants to enact the attribute, the consequences for learning experiences, and the effects upon students' growth and development. This summary was instrumental for undertaking the fourth stage of data analysis: writing the theory.

Careful attention was given to the trustworthiness, or credibility of findings and interpretations. A detailed research log with memos and reflexive notes on the research process was maintained to insure the accuracy of the record and heighten the researcher's awareness of subjectivity. Interview notes were constructed soon after completing an interview session and this enhanced the production of "thick description," (Geertz, 1973) an additional means to insure validity. In addition, periodic member checks and the triangulation of multiple data sources were also used to ensure validity.

FINDINGS

THE ENVIRONMENTAL THEORY OF HIGH-QUALITY UNDERGRADUATE HONORS PROGRAMS

The theory of high-quality honors programs developed in this study is described as an "environmental theory of high-quality honors programs" because it is anchored in the idea that "ideal" honors programs are microenvironments for teaching and learning in which program participants interact with each other and take specific actions that affect this environment. These actions, in turn, have consequences for students' learning experiences, and ultimately, their growth and development. Figure 1 summarizes the environmental theory. This theory of program quality was constructed from the findings of the study, specifically the 12 attributes that characterize an "ideal" high-quality honors program. To review, the researcher identified the attributes by analyzing the interview and documentary data, identifying data incidents that addressed the research questions and met the requirements of the decision rules, and then testing and refining the list of attributes that emerged. The attributes are organized into three thematic clusters:

- A culture animated by a shared commitment to individual and collaborative teaching and learning;
- Stewardship of resources;
- Continuous environmental monitoring and adaptation.

The three clusters and their respective attributes will be discussed in the next section. Because of the large volume of data collected throughout the study, it is not possible to print the entire set of responses provided by participants. However, tables detailing the theory are provided in this section and these present a summary of the responses addressing the research question and three sub-questions. Put simply, the narrative provided in the table represents the responses relevant to each attribute and question.

A culture animated by a shared commitment to individual and collaborative teaching and learning

This cluster of attributes in the theory demonstrates that high-quality honors programs, as microenvironments, develop their own culture—one that may be distinct from the culture for teaching and learning found elsewhere on campus. This microculture, as in any ecological system, is both created and influenced by program participants as well as local conditions, resources and program features. A culture animated by a shared commitment to individual and collaborative teaching and learning is fostered through the interplay of six program attributes:

- Customized Learning Experiences
- Purposeful Mentoring
- Learner-Centered Advising
- Open and Inviting Community of Teachers and Learners
- Opportunities to Create New Knowledge
- Shared Responsibility for Teaching and Learning

Customized Learning Experiences

Almost from the start of this study it was apparent that customized learning experiences were an integral part of a high-quality honors program. Administrators described altering students' programs to encourage those who wished to pursue custom-tailored projects or course sequences, faculty recalled innovative student projects or theses, and students recounted—often with enthusiasm or satisfaction—learning experiences that would not have been possible without the flexibility offered to individuals by the honors program. Every program included in the sample for this study offered evidence of policies and practices established by program administrators and faculty to enable students to customize learning experiences. For example, at Central Midwest State University, honors students select from honors courses, sections, course options, and research experiences to construct a personalized honors curriculum. Students are expected to complete eight honors experiences over a typical four-year period and they are not required to fulfill the university's undergraduate core curriculum requirements.

Some students even described a transformative effect, i.e., their customized learning experiences introduced them to new topics that, in turn, encouraged them to reconsider their career plans. For example, a biochemistry major in the College of Agricultural and Life Sciences at Midwest University found her true interest after taking steps to tailor her research experiences. In her words:

> I've jumped around, I've been in three different labs and I think that's somewhat better because you get to experience the different sorts of labs and the different things out there. I've worked with animals and cancer and they are totally different things. Just when I had one set of skills . . . I found out I really liked cancer and I might want to go into that, and if I had never left the other lab and gone into cancer, I would never have known that.

In some cases, students described situations where they had anticipated greater flexibility and their disappointment underscored the significance of this attribute. In no small measure, customized learning experiences enhanced their undergraduate learning experiences and positively influenced their growth and development.

Purposeful Mentoring

Purposeful mentoring emerged as another attribute of high-quality programs. Distinct from academic advising, purposeful mentoring fosters a culture animated by a shared commitment to individual and collaborative teaching and learning by connecting students and faculty in teaching and learning experiences that are typically anchored in research assistantships and thesis projects. Although mentoring can occur without design in myriad venues, the findings of this study indicate that purposeful mentoring in this setting is intentional, ongoing, and responsive to students' needs as they undertake extensive research or writing projects. The consequences for learning experiences are significant: students who feel valued and supported by faculty mentors persist in challenging learning experiences and develop

skills in analysis, problem-solving and laboratory techniques. For example, a nutritional science major at Midwest University explained how her initial anxiety about working in the laboratory dissipated over time as she discussed the progress of her research with her mentor. She commented that when problems arose in lab, "We just talked about how we just don't know why a lot of the times." This taught her that "there will be even more of a learning curve" but she said "it will be exciting. I think that at the end of [the research experience], I hope I come away confident and I think I will."

LEARNER-CENTERED ADVISING

The topic of academic advising ran like an electrical current throughout the interviews conducted for this study. No topic evoked as many impassioned responses from students as this one: Students who were satisfied with their experiences peppered their speech with positive exclamations, while those who found the advising experience lacking were visibly disappointed, and in some cases, downright bitter. It became evident early in the study that students held high expectations for the academic advising experience. More importantly, they often employed an expanded definition of academic advising—a definition shared by many of the faculty and staff who participated in this study. Advising emerged as a critically important attribute and central to creating a culture animated by a shared commitment to individual and collaborative teaching and learning, but it was not simply the quantity of advisors or the accuracy of the advice that mattered. After reviewing the data from across the sample it became clear that *learner-centered* advising was essential to students' positive growth and development. Instead of limiting the advising experience to a review of rules and requirements, advisors who engage in learner-centered advising take a holistic approach and focus on student learning. In so doing, they encourage students to explore courses and experiences that will complement their degree program. Some of these connections were more abstract. Advisors discussed issues that might be encountered in the field or profession and invited students to begin to formulate their opinion or response. A premedical student at Midwest University described an advising relationship where she discussed connections between her major, a proposed research assistantship, and her future work as a physician. As she recalled:

> [W]e talked about the different options and he said that research puts you at a different mindset and especially since I want to become a doctor. He said that as a physician I'm going to be confronted with problems all the time where you can't find the answer in a textbook and he said if I did the research it would be easier to formulate the questions and understand what's going on and be able to think of how I could go about solving the question.

The effect of this is significant: Students who find ways to bridge classroom and out-of-classroom learning make connections that lead to career opportunities or graduate study.

OPEN AND INVITING COMMUNITY OF TEACHERS AND LEARNERS

Another attribute of high-quality programs is an open and inviting community of teachers and learners. Because community is a word used liberally, and in wide-ranging contexts, this researcher was especially attentive when discussing this subject in the interviews and later, when examining the data from across the sample. It will come as no surprise to the reader that community, like beauty, is in the eye of the beholder. A community of teachers and learners might mean a group of students enrolled in an honors section or a close-knit cadre of students participating in a residential, living-learning environment. Given this range of perspectives, the researcher proceeded carefully, searching for evidence about the nature of interaction within the community and the relationship to teaching and learning. What emerged in this study was an interpretation of community that might at times appear loosely organized but one that is critical to creating rich undergraduate learning experiences that enhanced students' growth and development. Illustrating this, a student at Central Midwest State University described how feeling that she was part of the honors community encouraged her to learn from others in the program:

> *I think that when Honors College students get together, a lot of good ideas circle. And so when you lump us all together . . . it's kind of a good thing for everybody involved, because somebody starts talking to somebody and says, "Oh, I'm doing this," or, "You know, I'm working on this volunteer thing, do you want to come?"*

OPPORTUNITIES TO CREATE NEW KNOWLEDGE

Throughout the study, opportunities to create new knowledge emerged as an important attribute of high-quality programs. These opportunities take many forms and are found in classroom, laboratory and field settings. While most of the students interviewed for this study described meaningful experiences where they had participated in the discovery and generation of new knowledge, some did not. This may be due to the choices that students made as program participants (e.g., selecting an honors degree track that did not require a thesis) or the organizational structure of their respective programs. To be sure, the programs included in this study approached the topic of creating new knowledge with varying levels of intentionality. At one end of the spectrum there was a program designed around a series of required research experiences, and at the other end of the spectrum, a program that created pathways to honors degrees that did not include research or thesis requirements. Likewise, students shared examples of course assignments where they were encouraged to pursue questions of interest, either individually or collaboratively. This was not a universal experience, however, and the negative remarks that students shared about "cookbook" labs or uninspiring assignments underscored the importance of this attribute.

Students who have the opportunity to create new knowledge develop in several ways, including gaining confidence in their knowledge and skills and growing more comfortable with the complex and ever-changing nature of research. Their interest in

the process of discovery mitigates the frustration of failed experiments or faulty equipment. A biochemistry major at Midwest University explained that she had learned how things can go wrong, but also learned a lot about herself:

> [Y]ou actually feel like you're doing [something] important . . . like you are creating knowledge. From my research project there are only maybe a handful of papers on the topic that I am doing and in the big picture, with the stuff that I'm doing, could eventually create a cure for cancer or disease. . . . This is new stuff that you are learning, you're discovering what you are capable of doing and you're seeing a possible interest for your future.

SHARED RESPONSIBILITY FOR TEACHING AND LEARNING

In reviewing the interview and program materials, it became clear that a shared responsibility for teaching and learning is another attribute of high-quality programs. Programs that invite students, faculty and staff to be both teachers and learners help to create a culture animated by a shared commitment to individual and collaborative teaching and learning that is essential to enhancing students' growth and development. Interviewees from across the sample shared stories of opportunities to reinvent the traditional roles of teacher and learner and, while this was at first new and intimidating for some participants, the outcome was almost always the same. Students who worked in collaborative settings enjoyed learning from each other and those who assumed individual responsibilities for teaching were sometimes astonished to find they had so much to contribute. In this vein, a student who completed an integrated honors biology sequence at Midwest University commented upon the multiple areas of competence he developed during the final course in the sequence. He said the course required the following:

> [T]hat kind of team approach where you are given some papers to read, sit down with your team to discuss what it means, have the teacher talk about what it means and then be given a problem set to extend what you learned from the paper, what conclusions can you make.

He acknowledged that this "kind of class takes a lot of extra work, both on the part of the teacher and the T.A.s [teaching assistants], and the students" and concluded, "I thought it was an incredible learning experience, both from the standpoint of learning the information and how to learn, but also learning how to work as a group."

Additional detail about this cluster and the three sub-questions that enhanced the identification of the attributes is presented in Table 1.

STEWARDSHIP OF RESOURCES

This second cluster of attributes in the theory departs from traditional analyses of resources as "inputs" and the attendant belief that program quality is a function of the characteristics and quantity of inputs. Instead, this cluster of attributes in the theory

Table 1 Cluster One: A Culture Animated by a Shared Commitment to Individual and Collaborative Teaching and Learning

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Customized Learning Experiences	Programs offer students license to design their own academic programs by eliminating prerequisites or core courses; making the senior thesis optional; and/or offering multiple pathways or honors degrees. Programs encourage students to design individual or collaborative learning experiences by offering options for honors credit within a course and/or offering honors options in addition to honors courses or sections.	Students pursue an honors experience that best fits their major, schedule and learning goals. Students bypass introductory-level courses and select challenging, upper-level or graduate courses. Students who pursue topics of interest engage with the material and seek connections to previous coursework or research. Increasing schedule flexibility allows students to complement breadth and depth of study.	Students feeling challenged and empowered take responsibility for their learning and are more likely to remain in the program. Students who explore the disciplines are introduced to different topics and new ways of knowing. Having completed individual projects, students gain experience in negotiating project details, creating a schedule and managing their time. Having successfully tailored their undergraduate experiences, students are enthusiastic about life-long learning and approach their post-graduate plans creatively, with less regard for traditional pathways.

Table 1 (cont.) Cluster One: A Culture Animated by a Shared Commitment to Individual and Collaborative Teaching and Learning

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Purposeful Mentoring	Faculty demonstrate interest and care for students by sharing stories from professional experience and introducing students to new material, research or career opportunities.	Students who feel valued and supported by faculty mentors persist in difficult learning experiences and develop skills in analysis, problem-solving and laboratory techniques.	When students feel respected they take ownership of their learning and reexamine their career goals and assumptions about their potential for success.
Learner-Centered Advising	Academic advisors take a holistic approach and focus on student learning rather than limiting discussion to honors program or degree requirements.	Advisors encourage students to explore courses and experiences that will complement their degree program.	Finding ways to bridge classroom and out-of-classroom learning, students make connections that lead to career opportunities or graduate study.
Open and Inviting Community of Teachers and Learners	Programs offer a mix of social and cultural events to extend in-class learning, bring participants together, and offer a venue for discussion.	Students participate more in program activities when they have an especially meaningful connection to other participants.	When students feel connected and part of a community, they are more comfortable sharing ideas and opinions. They are more willing to examine their own beliefs and learn from other participants. Students meet honors students with similar goals and develop friendships outside of the culture of alcohol and parties.

Table 1 (cont.) Cluster One: A Culture Animated by a Shared Commitment to Individual and Collaborative Teaching and Learning

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Opportunities to Create New Knowledge	Programs increase students' access to research by offering research tracks, thesis requirements or summer research programs. Program administrators and faculty coordinate the research placement process to ensure a better match between students and their research interests. Faculty design course activities that require student participation, innovation, and inquiry.	Students who complete research projects or theses apply knowledge acquired in the classroom and forge a direct connection to the material. Students who are involved directly in the teaching and learning process explore topics with creativity.	Having completed research projects, students experience a feeling of accomplishment that inspires confidence to pursue new endeavors. After engaging in research, students learn there are no correct answers or unchanging facts. They are comfortable with ambiguity and interested in the process of discovery. Students who learn actively see the course material come alive and are more likely to retain and apply new information. Students exposed to research early make better-informed career decisions, especially regarding faculty careers.

Table 1 (cont.) Cluster One: A Culture Animated by a Shared Commitment to Individual and Collaborative Teaching and Learning

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Shared Responsibility for Teaching and Learning	Faculty share responsibility for teaching and learning by inviting students to participate fully in critical dialogue and creating opportunities for students to teach each other.	Students who are respected and valued for their knowledge will invest their time to prepare class presentations, lead and engage in discussions, and learn from each other.	When students assume the dual roles of teachers and learners, they consider both perspectives and move beyond traditional assumptions about authority and knowledge. Students who engage in collaborative teaching experiences develop the communication, organizational and planning skills required to work in teams.

suggests that program quality is dependent not only on the procurement of adequate resources but also a commitment to the thoughtful management of fiscal, human, and physical resources. High-quality honors programs require:

- Procurement and Measured Distribution of Fiscal Resources
- Investment in Human Resources
- Development of Physical Resources

PROCUREMENT AND MEASURED DISTRIBUTION OF FISCAL RESOURCES

The procurement and measured distribution of fiscal resources stands out as another attribute of high-quality programs. Even during periods of fiscal uncertainty, program administrators and faculty engage in actions that demonstrate thoughtful stewardship of fiscal resources. Interviewees across the study explained that while they never had enough funding to accomplish all of their goals for the program, they managed to find ways to secure new sources of funding and allocate those to best enhance students' learning experiences.

INVESTMENT IN HUMAN RESOURCES

Both positive and negative evidence revealed that a program's investment in human resources is another attribute of high-quality programs. While administrators and faculty members representing all of the programs included in this study cited budget constraints that limited the scope of their activities, some departments and programs take a more proactive—and sometimes creative—approach to managing their human resources. For example, some departments find opportunities to offer small honors courses by taking advantage of existing low enrollment courses. A faculty member in the English department at Central Midwest State University described how they successfully introduced a small honors course without increasing the dollar amount:

> Now it's fairly easy to offer that kind of class because [this course] is capped at a low number of enrollment. It's an introduction to English for English majors. There's a lot of reading and writing and discussion and it's usually about 25 students. So when we offer an honors version of that course, it's not necessarily more expensive to offer it.

This option depends upon program administrators, faculty members and department chairs who keep honors teaching "on the radar screen" and identify faculty to teach the honors version.

Keeping honors teaching at the forefront is an ongoing task for program administrators. Throughout this study, personal contact emerged as just as critical as the promise of funding in recruiting faculty to teach honors courses. Taking time to articulate the expectations and advantages of teaching honors courses demonstrates a program's respect for their faculty and this is another aspect of the investment in human resources. In no small measure, actions like these demonstrate a remarkable investment in the human resources responsible for offering a program that contributes to students' positive growth and development.

Development of Physical Resources

The analysis of interview material and program documents demonstrated that the development of physical resources is another important attribute of high-quality honors programs. Providing physical space for honors program functions helps establish a program's identity as an entity that exists beyond the sum of honors courses and degrees. In turn, this sends a signal to participants that their program is both viable and worthwhile. This was especially significant for participants in the larger and more diffuse honors programs included in this study. For example, the space identified for the honors college at Central Midwest State University serves as a home base where students know they are welcome to meet or hang out between meetings. A student at CMSU commented that it was nice that "there is a location where you can come for Honors College stuff because I think it would be a little disorienting if . . . there was no actual Honors College building. It's just out there somewhere." In much the same way, program participants also recognized virtual spaces such as web sites and electronic mailing lists as important resources for publicizing opportunities and building community.

Additional detail about this cluster and the three sub-questions that enhanced the identification of the attributes is presented in Table 2.

Continuous environmental monitoring and adaptation

Continuous environmental monitoring and adaptation requires that program participants are aware of the environment for teaching and learning, reflect upon current conditions and practices, and alter the program to enhance learning experiences. The attributes in this third cluster are:

- Advancing Program Visibility and Stature
- Fostering a Shared Commitment to the Program
- Continuous Assessment and Improvement

ADVANCING PROGRAM VISIBILITY AND STATURE

Advancing program visibility and stature emerged as yet another attribute of high-quality undergraduate honors programs. Undertaken mostly by program administrators, and, to a lesser extent, faculty and students, this attribute requires that participants are knowledgeable about program features and opportunities and aware of environmental conditions for teaching, learning, and recruiting students. In what may be an unfortunate cycle, programs that lack visibility are not accorded stature and, as such, may stand to lose participants and resources. A student majoring in information systems and finance in the Honors Program in the School of Business at Midwest University recalled that he had "recently encountered a student who . . . had no idea that the program even existed." Recalling the student's disappointment, he offered this assessment:

> *In my opinion, she was definitely the type of student who would be ideal for that kind of a setting. Unfortunately, she was a graduating*

Table 2 Cluster Two: Stewardship of Resources

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Procurement and Measured Distribution of Fiscal Resources	Program administrators secure and dedicate money for scholarships and research stipends and distribute these to attract a more diverse student body.	Scholarship money allows students to work fewer hours at part-time jobs and instead elect to take additional honors courses, pursue thesis research, or attend honors activities and events.	Providing funding for student scholarships and research stipends enables students and their families to attach greater meaning and significance to their work.
	Program administrators allocate a portion of funding to research mentors for supplies and expenses.	Faculty who receive S&E money —even limited amounts—are more likely to welcome students into their labs. This additional money improves access to research positions that match students' interests and learning goals.	Having observed the distribution of funding to their mentors, students realize the program or university values both research and undergraduate education.
Investment in Human Resources	Program administrators and faculty develop financial or other incentives to encourage faculty to teach honors sections.	When departments create additional honors sections students have greater access to small courses where the limited enrollment fosters interaction and supports innovative teaching methods.	Students who experience a personal and comfortable environment improve listening, analysis and speaking skills.
	Honors administrators encourage faculty to serve as departmental advisors or serve on committees.		

Table 2 (cont.) Cluster Two: Stewardship of Resources

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Development of Physical Resources	The honors program acquires adequate and centralized space for honors program administration, advising and student activities.	Program administrators provide on-line resources. Students are more likely to visit advisors and attend program events because they feel like they have access to these resources and are part of a community.	Having participated regularly in program activities, students assume leadership roles and develop planning, publicity and budgeting skills.

74

senior and she just learned about it now as she was heading out the
door. She was actually kind of disappointed . . . we were joking back
and forth that she was bitter now that she totally missed out on this
opportunity. It's kind of funny because she's a real go-getter type of
person. I'm sure had she seen it she'd have been all over it.

The lack of visibility, in this case, meant that one less woman would join a program already dominated by men, and because of this, the program lost an opportunity to diversify its student population. A student majoring in finance and marketing observed: "I think part of the problem is just visibility. That people just don't know it exists." Not unexpectedly, programs with small numbers of participants and limited resources may find it difficult to maintain or gain visibility, especially at large universities.

FOSTERING A SHARED COMMITMENT TO THE PROGRAM

Review of the interview material and field notes revealed that fostering a shared commitment to the program is yet another attribute of high-quality undergraduate honors programs. While the administrators, faculty and students interviewed for this study offered myriad visions for their programs, many expressed a common belief that program participants needed to be "on the same page" when it came to understanding the purpose and operations of their program. As an advisor in the psychology department at Midwest University observed dryly: "You are only as great as the people involved." She also cautioned that continuity within a program or department could make or break a student's experience because courses or research experiences are often dropped when key faculty members leave the university or assume new responsibilities. Although closely related to another attribute, advancing visibility and stature, this attribute presumes that program participants are not only aware of the program, but also invested in its continuance and success.

CONTINUOUS ASSESSMENT AND IMPROVEMENT

Continuous assessment and improvement is the final attribute in this environmental theory of high-quality undergraduate research programs. Across the sample of programs included in this study, interviewees described formal and informal efforts to evaluate and enhance programs and courses. Ongoing assessment occurred on several levels, including the individual, departmental and program levels. For example, all of the program directors interviewed shared observations about weaknesses in their programs or areas they hoped to develop or revise. In some cases, their recommendations were drawn from survey data, but many simply expressed their personal concerns as administrators who routinely monitored the daily operations of the program and lived experiences of students and faculty. They were keenly aware of the environment in which their program functioned and knowledgeable about the political, financial and organizational forces that would bear upon efforts to effect change. Some of the areas they cited as targets for improvement included introducing or expanding faculty training, updating recruitment strategies, streamlining paperwork, initiating thesis seminars, and developing new sources of funding.

Program administrators and faculty were genuinely concerned about students' learning experiences and intentional about keeping abreast of current problems or concerns that might impede students' positive growth and development. Even without incentives for reform, participants pursued new initiatives or revised current policies in order to better meet the needs of students. This was illustrated by the comments of a professor at Midwest University who told me of her interest in improving opportunities for students who earn honors credit by completing a special project or paper. She intended to use her appointment as the department honors coordinator to bring faculty together and "talk about what are good options and what has worked as good [honors options] ideas and try to get the students to give their input as well." She was concerned about this aspect of pedagogy and wanted to review the expectations "because just writing another paper is not a very useful exercise for the students for the most part."

Additional detail about this cluster and the three sub-questions that enhanced the identification of the attributes is presented in Table 3.

DISCUSSION AND IMPLICATIONS

There are three potentially significant implications for the findings of this study. First, the environmental theory of high-quality undergraduate honors programs developed in this study not only enlarges our understanding of honors programs, but also builds upon and extends the literatures on honors programs and academic program quality. As described earlier, both areas are characterized by scholarship that is largely descriptive. Second, the perspective on program quality advanced in this paper offers an alternative to traditional perspectives on program quality that consider the amount of resources available or the perceived reputation of the program. Furthermore, this study is unique because it examines program quality from the perspectives of key stakeholders. Finally, the theory of an "ideal" high-quality program presented here may be useful to program administrators and faculty not only because it offers a catalyst for discussion and reflection, but also because it invites program stakeholders to examine their respective programs and discern whether the theory, as defined by the 12 attributes, is aligned with their own program's definition of quality. If not, the findings of this study may suggest an agenda for change. This final section explores the implications of this research for these areas.

ENLARGING OUR UNDERSTANDING OF QUALITY IN HONORS PROGRAMS

While previous scholarship on honors programs has addressed various aspects of honors education, including program development, pedagogy, management, and evaluation, investigation of program quality and its relationship to enhancing students' growth and development has been limited. This theory of high-quality honors programs, constructed from multiple perspectives and grounded in systematically gathered data and analysis, offers new empirical evidence that may confirm or disconfirm varying beliefs and assumptions about honors program quality. In so doing, it presents a perspective on quality that is both unique and comprehensive.

Table 3 Cluster Three: Continuous Environmental Monitoring and Adaptation

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Advancing Program Visibility and Stature	Programs actively recruit high school seniors and first-year freshmen and emphasize the recruitment of students of color.	Efforts to publicize the program and recruit students lead to the enrollment of a more diverse student body.	Students who interact with students whose interests and backgrounds are different learn from others' experiences.
	Program administrators take actions to ensure that faculty members are aware of and knowledgeable about honors program requirements and opportunities.	Faculty members who are knowledgeable about the program provide accurate information about courses and think creatively about course substitutions or other "perks" that enhance flexibility in designing the academic program.	Inspired by faculty who support creative approaches to designing academic experiences, students "think outside the box" about courses, research, internships and service opportunities.
Fostering a Shared Commitment to the Program	Program administrators and faculty employ centralized leadership to serve as hub for communication, planning and policy-making.	Administrative coordination ensures continuity across departments and programs so that students receive timely and accurate information about their academic program.	Students who have confidence in the administration of the program are more open to taking risks.
	Faculty who are supportive of the program encourage other faculty members to teach honors courses and/or serve as mentors to honors students.	Enlarging the pool of participating faculty members helps to ensure the continuity of learning experiences.	Because a shared commitment to an honors program bolsters other attributes, it enhances the effects of these attributes.

Table 3 (cont.) Cluster Three: Continuous Environmental Monitoring and Adaptation

	Actions Taken by Stakeholders To Enact the Attribute	Consequences for Learning Experiences	Effects upon Students' Growth and Development
Continuous Assessment and Improvement	Program administrators and faculty assess and revise the program periodically.	Honors program requirements and options are updated to better meet the needs of teachers and learners.	Students who observe faculty and staff leaders who are committed to improvement view their program as dynamic and responsive.
	Faculty who teach honors students reflect on their teaching and participation in the program.	Honors courses and related learning experiences are altered to address advances in the field or improve pedagogy.	Having observed faculty who engage in continuous improvement, students learn how critical reflection can improve teaching and learning and be important for all professionals, regardless of discipline.

In constructing an environmental theory of high-quality honors programs, 12 attributes of high-quality honors programs were identified and organized them into three main clusters: a culture animated by a shared commitment to individual and collaborative teaching and learning; stewardship of resources; and continuous environmental monitoring and adaptation. While these attributes are specific to honors programs, it is important to note that support for each of the attributes can be found in several areas of the literature on higher education, including literatures on teaching and learning, advising, organizational theory, program quality and leadership.

As a foundation for further discussion, it is useful to consider the findings of this study in concert with the list of "Basic Characteristics of a Fully-Developed Honors Program" developed by the National Collegiate Honors Council (NCHC, 1994). Drawn from the collective experience and knowledge of council members and approved by the council's Executive Committee, the list offers 16 "characteristics which are common to successful, fully-developed honors programs" (1994). Although the document does not define "fully-developed" or "successful," the list serves as a point of departure for further consideration of the environmental theory of high-quality undergraduate honors programs. While the study described here was designed to develop an original theory of quality in honors program rather than "test" an existing set of criteria such as the NCHC's characteristics, there are areas of congruence between the two that lend support to the new theory. Likewise, there are attributes embedded in the environmental theory that are not addressed in the list of characteristics—and these "gaps" suggest opportunities for discussion, future research and, if warranted, revision of the list of basic characteristics.

Among the 16 characteristics of a fully-developed honors program, there is some correspondence—albeit in general terms—to the first set of attributes in the environmental theory, a culture animated by a shared commitment to individual and collaborative teaching and learning. For example, regarding advising—one of the 16 characteristics—the committee made this recommendation: "There should be provisions for special academic counseling of honors students by uniquely qualified faculty and/or staff personnel." While this guideline does not explicitly call for advising that is "learner-centered," it is clear that the committee recognized the significance of advising that is conducted by knowledgeable individuals and tailored to the learning needs of honors students. Another area of congruence is mentoring; while the list does not include a specific reference to mentoring, the following characteristic addresses some aspects of mentoring: "Faculty participating in the program . . . should be carefully selected on the basis of exceptional teaching skills and the ability to provide intellectual leadership to able students." This characteristic, when considered in tandem with the provision for special academic counseling, might be interpreted as a call for "purposeful mentoring." Likewise, the NCHC list of characteristics does not address the attributes "customized learning experiences" or "opportunities to create knowledge" but recommends experiential learning, including the following examples:

> *A fully-developed program will emphasize the participatory nature of the honors educational process by . . . offering opportunities for students to participate in regional and national conferences, honors*

> *semesters, international programs, community services, and other*
> *forms of experiential education.*

This characteristic of fully-developed honors programs—experiential learning—points to some of the ways in which students customize their learning experiences and find opportunities to create new knowledge. That said, the most striking finding associated with this attribute is not only the type of learning experience (e.g., international study program or senior thesis), but the significance of simply offering opportunities for students to tailor their learning experiences. As the findings of this study suggest, there are powerful effects upon students' growth and development when they have the freedom and flexibility to pursue learning experiences that complement their interests and learning goals. This particular attribute, customized learning experiences, may also provide evidence of a more recent phenomenon that was just emerging when the NCHC Executive Committee constructed their list in 1994. Perhaps due in part to increasing commercial marketing efforts that encourage high school and college students to customize everything from faceplates on cellular phones to the mix of songs downloaded to personal audio players, students are requesting that colleges and universities offer greater customization of services such as food service and housing options. Students at many colleges and universities can customize their on-line interactions with their institution by using web portals that direct them to campus news and resources—but only those they have selected. Given the increasing number of opportunities for customization, it should not come as a surprise that students would also value—and expect—customized learning experiences in an academic setting.

There are two additional attributes that contribute to a culture animated by a shared commitment to individual and collaborative teaching and learning: open and inviting community of teachers and learners and shared responsibility for teaching and learning. Neither is addressed directly in the NCHC list of basic characteristics, but the list does call for student participation in the governance of the program and recommends the following:

> *The program should have in place a committee of honors students to*
> *serve as a liaison with the honors faculty committee or council who*
> *must keep the student group fully informed on the program and elicit*
> *their cooperation in evaluation and development.*

There is greater alignment between the environmental theory and the NCHC list of basic characteristics in the area of stewardship of resources. The first attribute in this area, procurement and measured distribution of fiscal resources, corresponds with the NCHC call for an adequate budget and the second attribute, development of physical resources, dovetails with the following NCHC recommendation for adequate physical space: "The program should occupy suitable quarters constituting an honors center with such facilities as an honors library, lounge reading rooms, personal computers and other appropriate décor." Strangely, the final attribute in this area, investment in human resources, is not represented by the 16 characteristics on the NCHC list. When faculty and staff are cited in the list of characteristics, the reference is limited to recommendations for the organization of faculty and staff positions. For example, one characteristic states: "The honors director should report to

the chief academic officer of the institution." No mention is made of the actions that program administrators and faculty can take to encourage and sustain participation in learning experiences for honors students.

There is a modest amount of support for the third and final area of the environmental theory: continuous environmental monitoring and adaptation. One attribute, advancing program visibility and stature, is expressed clearly in the following NCHC characteristic: "The program should be both visible and highly reputed throughout the institution so that it is perceived as providing standards and models of excellence for students and faculty across the campus." The environmental theory, however, provides a richer interpretation of the significance of program visibility and explains the positive contribution to students' growth and development. A second attribute in this area, fostering a shared commitment to the program, draws support from an NCHC characteristic that proposes the following:

> The program should have a clear mandate from the institutional administration ideally in the form of a mission statement clearly stating the objectives and responsibilities of the program and defining its place in both the administrative and academic structure of the institution.

This attribute also finds expression in a characteristic describing faculty affiliation: "Faculty participating in the program should be fully identified with the aims of the program." Although the precise definitions of the terms and phrases presented in the NCHC list are uncertain, it seems very likely, at least in this context, that "fully identified with the aims of the program" is closely associated with a shared commitment to the program. The final attribute in this area, continuous assessment and improvement, is articulated clearly in the following characteristic: "The fully-developed honors program must be open to continuous and critical review and be prepared to change in order to maintain its distinctive position of offering distinguished education to the best students in the institution." The environmental theory may be useful to practitioners because it provides additional insight into the actions that program participants take to insure continuous assessment and improvement and details the consequences for learning experiences and the effects upon students.

NEW PERSPECTIVES ON PROGRAM QUALITY

In addition to enlarging our understanding of quality in honors programs, the environmental theory of high-quality honors programs also builds on and extends the literature on academic program quality. This research offers three significant contributions to the literature. First, by using Haworth and Conrad's (1997) definition of quality, this study produced a theory of academic program quality that places student learning at the center of the discussion. The bulk of previous studies have examined program quality by evaluating measurable inputs or outcomes—or even the perceived quality of a program as demonstrated by reputational rankings—but this study is rooted firmly in the belief that the effect upon students' growth and development is the yardstick by which program quality should be measured. As such, the environmental theory joins a growing body of research that recognizes that program budgets,

adequate staff, retention statistics and other related variables may contribute to program quality but do not by themselves define it.

In addition to examining program quality through the lens of an alternative definition of high-quality programs, this study also contributes to our understanding of program quality by presenting a theory of program quality constructed from the perspectives of stakeholders in honors programs, namely students, faculty and administrators. By using qualitative methods of inquiry, including interviews with participants of four programs at two institutions, the attributes of high-quality honors programs were identified along with the actions required to enact the attributes, the consequences for learning experiences, and their effects upon students' growth and development. As a result, the environmental theory confirms that program quality is multidimensional and multilevel, and represents a significant departure from the traditional outcomes approach to quality represented in the literature on honors programs (for example, Reihman, Barhus, and Whipple, 1990) and, more closely, parallels Astin's talent development approach (1985) and Haworth and Conrad's (1997) engagement theory of high-quality programs.

TRANSLATING THEORY INTO PRACTICE

In much the same way that the theory of an "ideal" high-quality honors program presented here suggests an opportunity to re-visit the NCHC's list of basic characteristics of fully-developed programs, this study may also provide the impetus for programs directors, faculty, and students who wish to undertake a critical review of their own programs. By comparing existing programs with the ideal type, stakeholders can identify similarities and differences and discuss these in the context of the program, the institution, or the mission of the program. In addition, the theory presented here may encourage program administrators to pursue new avenues in program evaluation. This study was designed from the beginning around a definition of quality that placed students' learning, growth and development—rather than student satisfaction—at the center, and this could be easily translated into a template for focus groups or survey instruments.

TECHNICAL APPENDIX

This appendix contains supplemental information about the research methods used in this study.

CONSTANT COMPARATIVE METHOD

Consonant with the goal of developing a grounded theory of quality in honors education, rather than testing a hypothesis[2] constructed from previous, tangential work, I designed and conducted this study following the principles of qualitative research. I employed the constant comparative method (Glaser and Strauss, 1967; Conrad, 1982) to allow for the systematic, ongoing, open-ended, inductive discovery of grounded theory. Glaser and Strauss describe four stages in the constant comparative method: (1) comparing incidents applicable to each category; (2) integrating categories and their

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[2] For a detailed description of inductive data analysis, see Bogdan and Biklen, (p. 6).

properties; (3) delimiting the theory; and (4) writing the theory (1967, p. 105-115). These overlapping stages require that the researcher begin by coding incidents in the data and creating as many categories as possible as they emerge. This continues as the researcher compares new incidents with previous incidents in the same and different categories. Eventually, "the constant comparative units change from comparison of incident with incident to comparison of incident with properties of the category that resulted from initial comparisons of incidents" (Glaser and Strauss, 1967, p. 108). The researcher delimits the theory when the emerging theory begins to come together and the original list of categories is refined to reflect a select group of categories in close connection with the data. Glaser and Strauss recommend "theoretical saturation" as a strategy for managing the volume of categories that will continue to emerge and describe saturation as the point where "what has been missed will probably have little modifying effect on the theory" (p. 112). After arriving at theoretical saturation and delimiting categories, the researcher translates codes and categories into a theory that informs major themes. This activity builds the framework for writing the theory in the final stage of the constant comparative method. The researcher verifies grounded theory throughout the process by examining the relationships between hypotheses and supporting data, eliminating concepts and hypotheses that lack sufficient support or closeness to the data (Conrad, 1982).

The constant comparative method of generating grounded theory offered congruence with the purpose of my study as it enabled me to focus upon the multiple perspectives of the participants so that I could learn about the ways in which they think about honors programs, decide what is important or valuable, and create personal definitions of quality given the context of their program or university. This method also offered a means by which data analysis could inform and direct data acquisition (Glesne, 1999, p. 84). By employing inductive analysis of these data, I was able to examine and interpret the relationships between the data and, in turn, develop an original theory of quality specific to undergraduate honors education.[3]

Theoretical sampling

Theoretical sampling (Glaser and Strauss, 1967) was employed as an overall strategy for the selection of participants and this afforded me considerable flexibility in meeting the needs of developing theory. Theoretical sampling, as described by Strauss and Corbin (1990, p. 183), can take several forms, including the purposive or deliberative selection of sites, persons and documents. For this study, I identified initial criteria for selecting programs and participants and altered my selection only to maximize theoretical relevance as the theory emerged (Glaser and Strauss, 1976, p. 46).

The interviews

The interviews for this study began with a less focused structure in order to provide participants the opportunity to think broadly about their experiences rather than focus too narrowly on topics or issues that I might draw to their immediate attention.

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[3] Strauss and Corbin provide a thorough explanation of the development of theory in Basics of qualitative research: Grounded theory procedures and techniques (1990).
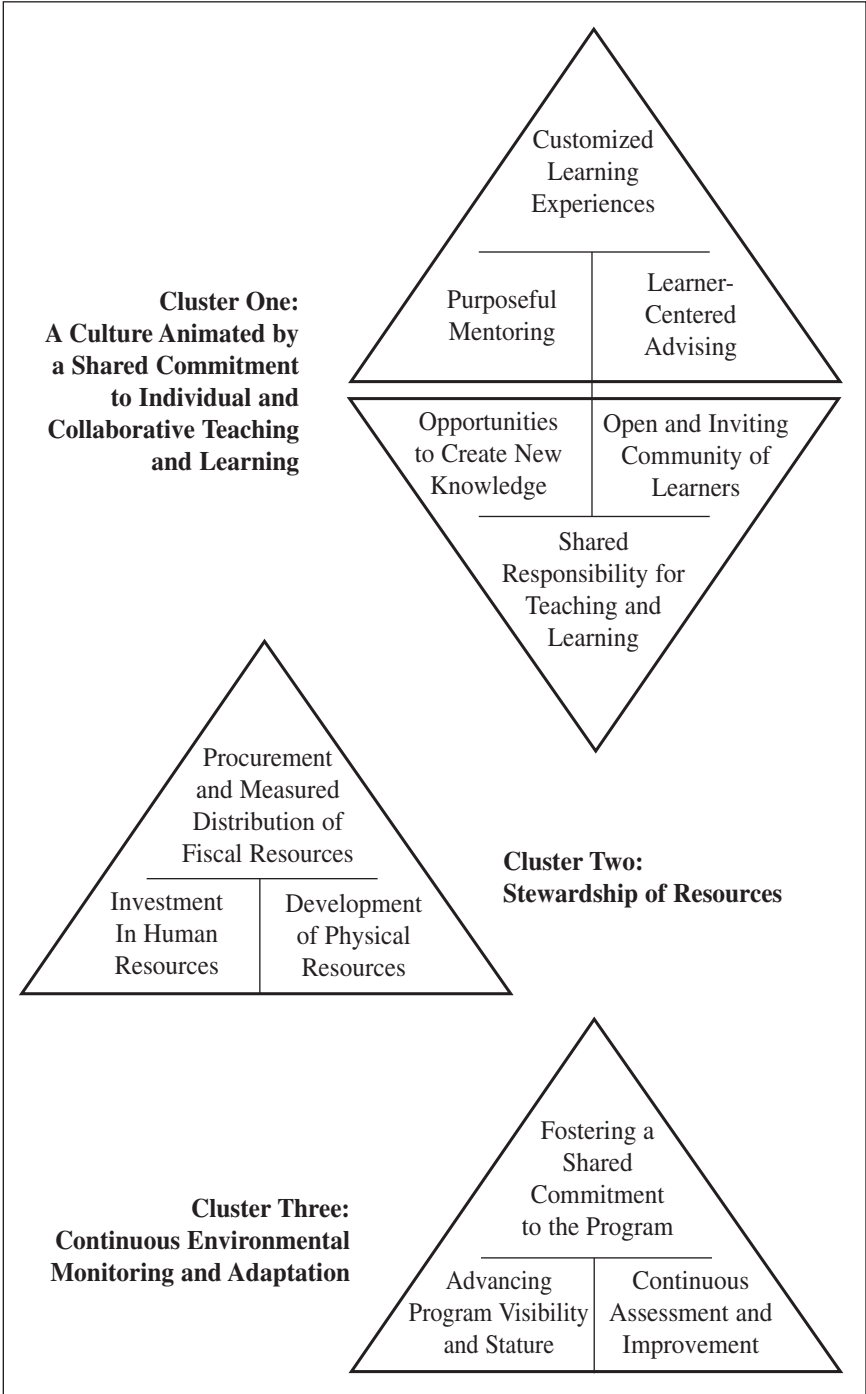
The interviews were marked with a high degree of overtness as I provided a thorough description of the project, its purpose, and the ways in which participants' comments would be used. Finally, I worked to create a respectful and relaxed environment for each interview.

Because the interviews offered the most significant source of data and because I did not want my assumptions to cloud the credibility of this study, I primarily used open-ended questions (e.g., "Where did the real learning occur in this program?") and probes for further clarification. I tested this approach in the first few interviews and revised some questions over time, mindful of Glesne's recommendation to strike a balance so that the questions allowed participants to reflect critically but were not so vague that they couldn't possibly begin to answer (Glesne, 1999, p. 75).

In addition to the conduct of the interview, the tenor of the interview was also important. I aimed for a conversational style that invited rather than preempted thoughtful replies. I also paid particular attention to the development of rapport, noting Glesne's assertion that "rapport is tantamount to trust and trust is the foundation for facilitating full and detailed answers to your questions" (Glesne, 1999, p. 83). To foster rapport, then, each interview session began with my personal introduction and expression of appreciation to the individual for their participation. I explained that each interview would last approximately 30 minutes to one hour, and shared this timeline with all participants when we scheduled the meeting and also at the start of the interview. I also described my commitment to preserving privacy and explained that all responses would be kept confidential and reported anonymously. Before we began the interview, I asked permission to tape record the session and asked the participant to read and sign the individual consent form. Finally, I invited participants to ask questions about the interview and/or study.

The interview questions were designed to hear the experiences and perceptions of the participants and were not intended as checks on the participant's knowledge base—questions that might be perceived as threatening. The possibility that participants might perceive my questions as threatening—or invasive or any number of possibilities—underscored the need to establish rapport but also heightened my awareness of the dynamics of the interview. Again, I turned to Glesne's (1999) recommendations for anticipation, flexibility in questioning, and the ability to seem open, naïve and nonjudgmental. Finally, I kept in mind Bogdan and Biklen's advice that "Good interviewing involves deep listening" (p. 96).

Figure 1: Overview of the Environmental Theory

Cluster One:
A Culture Animated by
a Shared Commitment
to Individual and
Collaborative Teaching
and Learning

Customized
Learning
Experiences

Purposeful
Mentoring

Learner-
Centered
Advising

Opportunities
to Create New
Knowledge

Open and Inviting
Community of
Learners

Shared
Responsibility for
Teaching and
Learning

Procurement
and Measured
Distribution of
Fiscal Resources

Investment
In Human
Resources

Development
of Physical
Resources

Cluster Two:
Stewardship of Resources

Cluster Three:
Continuous Environmental
Monitoring and Adaptation

Fostering a
Shared
Commitment
to the Program

Advancing
Program Visibility
and Stature

Continuous
Assessment and
Improvement

DISTRIBUTION OF INTERVIEWEES

Sample Size   N = 58

Case One: School of Business at Midwest University
Administrators	N = 1
Faculty	N = 1
Student	N = 7

Case Two: College of Letters and Science at Midwest University
Administrators	N = 2
Faculty	N = 6
Students	N = 11

Case Three: College of Agricultural and Life Sciences at Midwest University
Administrators	N = 1
Faculty	N = 6
Students	N = 7

Case Four: Honors College at Central Midwest State University
Administrators	N = 2
Faculty	N = 6
Students	N = 8

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