

Student Perceptions of Academic Service and Instructional
Quality over a Four-Year Academic Experience

by

Thomas S. Westbrook
Drake University

Keith Greiner
Iowa College Student Aid Commission

Kevin Saunders
Iowa State University

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Student Perceptions of Academic Service and Instructional Quality over a Four-Year Academic Experience

Thomas S. Westbrook, Keith Greiner, and Kevin Saunders

[70] This article reports the results of a study of student perceptions of expected and experienced academic service and instructional quality across 4 years of college enrollment. Results indicated a pattern of perceived change over 4 years with a significant difference between students' expectations to experienced quality. The largest pre- to post-assessment change was a negative gap during the first semester in both academic service and instructional quality. Subscale scores revealed both positive and negative variations over the 4-year period. The findings suggested a continued support for linking in-class and out-of-class faculty and student development initiatives.

Introduction

Each year, 2 million high school graduates take one of the most anticipated steps of their lives as they leave home for college (U.S. Department of Education, 2001). Years of planning and growing expectations become experience and that experience becomes both dramatic and traumatic reality. By the end of the following 6 years, 59.2% of the students with a baccalaureate degree goal will graduate from the college or university where they started, and 67.4% will have completed at any institution (U. S. Department of Education, 2003).

Several factors influence first year students' learning outcomes and academic effort including personality traits (Bauer & Liang, 2003), expectancy of success (VanZile-Tamsen, 2001), individual views of the learning environment (Donahue, 2004), and [71] enrollment in freshmen or first-year experience courses (House & Kuchynka, 1997; Strumpf & Hunt, 1993). For Kuh (2000), student learning and retention are a function of academic effort and the interactions between students and important socializing agents such as faculty, student affairs professionals, and peers. In fact, Kotler and Fox (1985) indicated that non-classroom service quality combined with the student's classroom experience forms an overarching perception of quality teaching. Tinto (1993) suggested faculty actions both within and outside of the classroom shape the way students come to judge institutional quality and influence re-enrollment decisions. This study considered students' expectations and perceptions of academic service and instructional quality over time in an effort to better understand the interaction of expectations and experiences.

Research is replete with studies that measure post-assessment experiences used to investigate the college experience in a setting where perceptions of importance and experienced quality are captured at the same time (Schreiner & Juillerat, 2002). While a snapshot methodology is commonly used to measure student satisfaction, Campbell and Stanley (1963), Gall, Borg, and Gall (1996), Best and Kahn (1993), Trochim (1999), and Zikmund (2000) suggested pre- to post-assessment methodology improves understanding of respondent experiences between two points in time. Similarly, Pascarella, Wolniak, and Pierson (2003) indicated that a matched sample pre- to post-test design afford optimal “statistical control” for an individual’s status on the outcome variable and measure the outcome variable at distinct points in time. This study provided a 4-year view of the collegiate experience through a matched sample pre- to post-assessment methodology beginning with direct from high school student expectations of academic service and instructional quality followed by measures of the “reality” that existed for the students following the first term and after 4 years.

The purpose of the study was to determine the congruence between the expected and experienced measures of academic service and instructional quality among students across 4 years of study. Academic service quality describes many non-classroom services provided by faculty such as availability, reliability, trustworthiness, and empathy. Instructional quality includes student evaluations of learning achieved and faculty [72] measures of enthusiasm, organization, interaction, individual rapport, breadth, assignments, and workload.

The study of expected and experienced quality draws upon work from the consumer satisfaction arena. Parasuraman, Zeithaml, and Berry (1988) and Boulding, Kalra, Staelin, and Zeithaml (1993) described customer satisfaction as the difference between expected and experienced quality. The difference is the quality gap or what is also known as the disconfirmation (Festinger, 1957). The gap is calculated using the formula $Sg = O - E$ where Sg is the Service Quality Gap, O is experienced quality at the end of the longitudinal study period, and E is expected quality at the beginning of the study period. Zeithaml, Berry, and Parasuraman (1988) described how the gap shows both degree and direction. A positive gap suggests the experience exceeds expectations while a negative gap suggests quality does not meet expectations.

Schank (1990) suggested that a combination of expectations and observations is fundamental to a person’s ability to understand and conduct daily affairs. Applying this within the higher education context, students enter college with mental models (Senge, 1990) or “scripts” that define their perception of the higher education experience. To be successful they must negotiate the ethos of the learning community while completing coursework and gaining knowledge. Each new experience updates the students’ collection of knowledge about the college, higher education in general, and the alignment of a new experience with past experiences and expectations. The notion of a disconfirmation between expected and experienced quality indicates that the student perceived the experience to be different from current scripts about the college or university. The consumer perspective applied to higher education services was studied by Devine (1995) and Ruby (1998), who reported gaps between expected and experienced

student services. Greiner and Westbrook (2002) found a direct correlation between academic service quality and instructional quality in their study of direct from high school students using a pre- to post-analysis of the students' first term experience.

While colleges and universities use several instruments to obtain information about student satisfaction (e.g., College Student Satisfaction Questionnaire, Student [73] Satisfaction Inventory, College Student Survey), researchers have noted the insufficiency of research on student satisfaction with college (Beltyukova & Fox, 2002). In addition, it is not clear how student expectations prior to college enrollment relate to student satisfaction with their collegiate experiences. Donahue (2004) contended that in order to promote first-year students' connection to their learning environment, it is necessary to ascertain students' perceptions, personal views, and experiences.

For our study, two research questions explored the difference between expected and experienced academic service and instructional quality: (a) What is the difference between the expected academic service quality and the experienced academic service quality of students experiencing 4 years of college? and (b) What is the difference between the expected instructional quality and the experienced instructional quality of students experiencing 4 years of college?

Method

Participants

Undergraduate students enrolled in an introductory biology class at a Midwestern private university in September 1999 served as the target group to obtain the sample and data used in this study. This class served as a convenient purposive sample to shed light on the research questions (Creswell, 1998; Trochim, 1999). Introduction to Biology is a basic introductory experience that serves as a prerequisite for a variety of majors including pre-medicine, communications, business, arts, and pharmacy. The large lecture section includes smaller discussion groups held over the term. The class enrolled 360 students who completed the 1999 pre-term assessment of expected academic service and instructional quality and 245 who completed a post-assessment in November 1999. This yielded a sample of 198 direct from high school students representing 37% of the first-year class. Sixty-one of the 198 students completed an additional post-assessment 4 years after their first term of study.

The pre-term assessment is described as 'Expected.' The first post-assessment is described as Experienced₁.' The second post-assessment is described as "Experienced₂". Sixty-one students completed both the pre-term assessment of expected quality and the [74] 2003 post-assessment of experienced quality or Experienced₂. Fifty students completed all three surveys, and were analyzed as a second, concurrent sample. The pre-test assessment was administered during the third class period of the fall semester. Experienced₁, was administered at the end of the first semester, but before final exams. The second post-assessment, Experienced₂, was administered by mail at the end of the Spring 2003 semester, but before graduation ceremonies. Together, the three-point

measurements formed a longitudinal study of the form suggested by Trochim (1999) and a single group interrupted time-series design suggested by Creswell (2003).

Of the 198 direct from high school students who completed both the pre-term and first post-assessment, all were full-time students ages 17, 18, and 19 and 69% were female. Of the 61 students who completed the pre-term assessment and second post-assessment, most were women (82.0%) and enrolled full-time (93.9%). All graduated from high school in 1999. Ninety-seven percent responded on the pre-term assessment that they had high school GPAs of 3.0 or greater, while 72% responded that their college GPAs were 3.0 or greater. Forty-one respondents (67.2%) reported a GPA decline from high school to college. Fifty-two of the respondents (85.2%) indicated the same or a very similar major in both the pre-term assessment and post-assessment.

Participating students signed releases in 1999 agreeing to participate and were advised of the confidential nature of their responses. Releases were separated from questionnaires to ensure confidentiality. The decline of 137 direct from high school student responses between Expected and Experienced₂ was attributed primarily to the use of a mail survey for the Experienced₂ post-assessment, and the busy schedules of seniors during the weeks before the 2003 graduation ceremonies and summer break. An additional factor would include the normal attrition of students during the 4 years.

Instrumentation

The study used a pre- to post-assessment quasi-experimental design (Campbell & Stanley, 1963; Gall, Borg & Gall, 1996; Trochim, 1999; Zikmund, 2000). The pre-to-post-assessment design provided a measurement of expectations followed by a period of time in which the student experiences the college to create a revised level of quality. The [75] post-assessment measured the students' rating of their experience of academic service and instructional quality.

The academic service quality dimensions were measured using the Service Quality (SERVQUAL) instrument developed by Parasuraman, Zeithaml, and Berry (1988) along five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. The instrument creators demonstrated mean score stability across a variety of service organizations including: banks, credit card providers, repair and maintenance services, and telephone services. They intended for it to be a reliable and valid measure that can be adapted to a variety of organizations. Content and convergent validity was observed between individual scales and overall evaluations of quality. Coefficient alpha values ranged from 0.72 to 0.86 for each construct and 0.92 overall (Parasuraman, et al. 1988). Tangibles describe the physical environment of the campus including buildings, appearance of the campus and faculty/staff, equipment, and other elements of the environment. Reliability explores whether the student can count on promises being met, while responsiveness explores willingness of the faculty to be responsive and helpful. Assurance describes personal trust, whether a student can trust the faculty with personal

information, personal sense of self-worth, and the desire to grow. Empathy is the student's perception of the extent to which the faculty demonstrates a personal caring about the student.

The instructional quality dimensions were measured using Marsh's (1982, 1987) Students' Evaluation of Educational Quality (SEEQ). The Marsh instrument is a valid and reliable source of mean score data used to evaluate instructional quality of over a half-million students. Marsh's theoretical educational quality constructs are defined by nine dimensions of instructional quality: (a) learning, (b) enthusiasm, (c) organization, (d) group interaction, (e) individual rapport, (f) breadth, (g) examinations, (h) assignments, and (i) overall workload. Marsh and Dunkin (1997) reported that the instrument has provided consistent constructs in 21 subgroups of responses from an evaluation of 24,158 courses. The estimated reliability for SEEQ factors is about .95 for the average response from 50 students and .90 from 25 students. Marsh and Dunkin also reported that the [76] instrument is stable over time, noting that in a longitudinal study where students were asked to rate a course at the end of the course and again several years later, end-of-class ratings had a strong correlation ($r = 0.83$) with the retrospective ratings. In addition, the instrument has been used in over 50,000 classes representing more than 1 million surveys.

The survey instrument used in this research combined the two questionnaires. The combined instrument retained the original 7-point Likert scale for the SERVQUAL and the 5-point Likert scale for the SEEQ.

Data Analysis

The analysis of the data covered three student groups: (a) the 198 matched direct from high school students who completed both Expected and Experienced academic service assessments and 197 matched direct from high school students who completed Expected and Experienced instructional quality assessments; (b) 61 matched students who completed Expected and Experienced₂ assessments; and (c) 50 matched students who completed Expected, Experienced₁ and Experienced₂ assessments resulting in repeated measures t-tests of mean comparisons for the three time periods. The methodology provided researchers with a modification of the single group interrupted time-series design described by Creswell (2003) and a longitudinal perspective of the changes in perception that may take place within the first few months and 4 years of the college experience.

Results

The 198/197 students who completed the Expected and Experienced₁ assessments came to the university with high expectations of academic service and instructional quality and indeed received academic service and instruction well above the mid-points on the research instrument scales (See Table A1).

Significant differences between expected and experienced academic service quality were found in three of the five subscales including tangibles, reliability, and assurance. Significant differences between expected and experienced instructional quality occurred in all nine subscales. In all instances, the scores on the post-assessments were lower indicating a disconfirmation or negative gap.

[77] The scores of the 61 students who completed the Expected and Experienced₂ surveys 4 years later are listed in Table A2. Students' expectations significantly exceeded experienced quality in the academic service quality measure. The negative gap occurred in the overall construct and four of the five subscales: tangibles, reliability, assurance, and empathy. Expectation also exceeded experienced quality in the instructional quality measure. A significant difference (negative gap) occurred in the overall construct and in all the subscales: (a) learning, (b) enthusiasm, (c) organization, (d) group interaction, (e) rapport, (f) breadth, (g) examinations, (h) assignments, and (i) overall workload. Overall, the scores revealed a predominantly negative change between expected and experienced instructional quality for first-year students over the duration of the 4-year academic experience.

The expectations of 50 students completing all three surveys were challenged within the first semester as the expectation ratings exceeded experienced quality in all but the construct responsiveness. Table A3 shows the average score, and changes in scores with the September 1999 pre-term assessment as the common reference point. The comparison of the pre-term assessment with both Experienced₁ and Experienced₂ post-assessments showed a negative change in both time periods for all constructs except responsiveness. Comparisons between the pre-term assessment and both Experienced₁ and Experienced₂ post-assessments were significant at the .05 level for all constructs except responsiveness, empathy, and overall leaning in the first comparison, and responsiveness, learning, individual rapport, and overall learning in the second comparison.

A comparison between Experienced₁ and Experienced₂ showed three significant differences in scores on three constructs, tangibles, empathy, and individual rapport. On empathy and individual rapport there were significant increases and on tangibles there was a significant decrease in scores. Generally, the largest change between expected and experienced service quality occurred within the first 4 months of the college experience as 13 of the 16 comparisons showed a significant change in the first time interval [78] (Expected to Experienced₁) and only three comparisons proved significant between the second time interval (Experienced₁ to Experienced₂).

Table A3 shows three patterns of change between the three points of time. In six constructs the scores declined in both the first and second time interval (Expected to Experienced₁ and Experienced₁ to Experienced₂). The constructs were: (a) tangibles, (b) assurance, (c) enthusiasm, (d) organization, (e) breadth, (f) assignments, and (g) overall learning. The first six of these showed greater declines in the first time interval than in the second interval. The data suggested a first-semester decline and that the students did not adapt to the university's level of academic service and instruction quality on these

constructs to the same extent that they adapted to those with declines followed by increases.

In six constructs the scores declined in the first time interval and rose in the second time interval (Expected to Experienced₁ and Experienced₁ to Experienced₂). The pattern of decline followed by a rise occurred in the constructs of: (a) reliability, (b) empathy, (c) learning, (d) group interaction. (e) individual rapport, and (f) exams. The variable pattern of changes may have been the result of the students becoming more familiar with the collegiate experience as it existed versus as they initially expected. Only in responsiveness did the scores increase in both time intervals, but those increases were not significant (at the .05 level).

Discussion, Conclusions, and Recommendations

The findings of this study concur with Tinto's (1993) notion that faculty actions outside of the traditional classroom influence the means by which students "come to judge the intellectual ethos of the institution" (p. 53).

The negative gap found in this study may be attributed to many causes and raises many questions beyond the scope of this research. Is the negative gap simply the difference between the students' mental model of the high school experience versus the reality of the higher education experience? At what point does the negative gap impact student retention? How different is the anticipated to experienced change of the continuing student from those who left the university following the first term or during the 4 years? Is it possible that faculty and student service professionals do not fully [79] understand the impact of their actions within and outside the classroom setting in relation to academic service and instructional quality?

Not all of the scores decreased over time. In fact, the empathy construct decreased and then significantly increased over time. Individual rapport decreased significantly and then increased significantly over time, although not returning to the pre-term level. This does suggest variability of scores occur in both a negative and positive direction.

The findings of this study add support to our understanding that the interaction between the students' experience inside and outside the classroom has a profound impact on the collegiate experience. It provides additional evidence of the need to consider the complexity of how students view their learning environment in an effort to better understand students' college experiences in their first year and beyond (Donahue, 2004).

The findings also support the importance of longitudinal research to get a more complete picture of the collegiate experience. For example, the relatively high scores on Experienced₂, if examined from a one-shot evaluation, would seem generally high. It is not until one observes the change between expected and experienced that a more complete and different picture of the impact of the collegiate experience emerges. Thus, this research supports the contention of Strange et al. (2002), that chronicling changes in students' attitudes and beliefs over the course of their college experience is valuable to

efforts to support students.

This study examined the congruence between the expected and experienced measures of academic service and instructional quality. When the 4-year mean score comparisons were considered within the parameters of this subject university setting, the following conclusions were found: (a) Student expectation of academic service quality and instructional quality is significantly higher than the actual experience encountered with the greatest change taking place within the first semester and (b) Student expectation to experienced academic service and instructional quality is a dynamic process over the 4-year collegiate experience.

This research could be extended to educational areas including secondary schools and graduate schools to complete an overall picture of the relationship between expected [80] and experienced student service and instructional quality. Research should be conducted to determine the impact of the negative gap on satisfaction and retention.

Attention to students' expectations and experiences of the college experiences provides multiple benefits to academe. It is hoped that this type of research may lead to a dialog among faculty, student service administrators, and students to discuss those aspects of the collegiate experience most significant to them, thereby providing opportunity to find new ways to enrich the collegiate experience.

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Authors Note

Thomas S. Westbrook is professor of leadership and adult development in the School of Education at Drake University. His research interests include adult learning, distance education, and the impact of college on students. Keith Greiner is research director and legislative liaison at the Iowa College Student Aid Commission. He conducts studies of higher education policy and manages a database used by state and institutional policymakers. Kevin Saunders is coordinator of Continuous Academic Program Improvement at Iowa State University. His research interests include the examination of factors related to degree attainment of low socioeconomic students, the organizational culture of higher education institutions, and factors related to student engagement. Correspondence concerning this article should be addressed to Dr. Thomas S. Westbrook, School of Education, Drake University, 2507 University Avenue, Des Moines, IA 50311 or you may contact Dr. Westbrook at Thomas.westbrook@drake.edu

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Authors may be contacted at the following addresses.

Thomas Westbrook
Professor of Leadership and Adult Development
School of Education
Drake University
2507 University Avenue
Des Moines, IA 50311
www.drake.edu

Keith Greiner
Research Director/Legislative Liaison
Iowa College Student Aid Commission
200 10th Street, Fourth Floor
Des Moines, IA 50309
www.iowacollegeaid.gov

Kevin Saunders
Coordinator of Continuous Academic Program Improvement
1550 Beardshear
Iowa State University of Science and Technology
Ames, IA 50011-2021
www.iastate.edu