

Refereed Article

Enhancing Nontraditional Student Learning Outcomes in Higher Education

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Abstract

This study contributes to the limited literature on learning outcomes assessment for nontraditional students. There were no substantial differences in the effects of the university experience on enhancing learning outcomes for nontraditional and traditional students across 24 specific areas; there were also minimal differences in satisfaction and academic success (as measured by grade point average). Nontraditional students were defined as minimally to highly-constrained by three life constraints (age, children, and full-time work). Moderately to highly-constrained nontraditional students were less involved with faculty members outside of class and less engaged in a variety of extracurricular activities that have been shown to enhance student learning.

Introduction

Due to increasing numbers of older, nontraditional students (hereafter nontraditional) in higher education, researchers have attempted to

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determine if they achieve the same educational outcomes as younger traditional students. Campus administrators and faculty also want to know if nontraditional students are as satisfied with the college experience and perform as well academically as traditional students.

Study Purpose

The purpose of this study is to contribute to the limited literature on learning outcomes for nontraditional students using self-report data to detect differences between nontraditional and traditional students on survey questions concerning perceived levels of learning. It was hypothesized that there would be no significant differences between nontraditional and traditional students on perceptions of learning. Differences in overall satisfaction and GPA were also examined to determine if our findings would be consistent with the research literature showing no significant differences. The results would help determine whether nontraditional students have a satisfying and successful experience at the university similar to traditional students. From the student perspective, results would also confirm whether nontraditional students have similar levels of learning across 24 specific areas assessed in the study compared to traditional students. The level of nontraditional student involvement in campus extracurricular activities was also evaluated.

Defining Nontraditional Students

Before conducting this study on learning outcomes, the researchers needed to establish a meaningful definition of the nontraditional student population. Some studies in the literature define nontraditional students based on age only, while others utilize a broader definition. This study chose to challenge existing definitions and suggest a new and more pragmatic definition derived from traditional (age only) and more recent broader definitions.

Although the age ranges for nontraditional and traditional student groups vary across studies, the typical age range describing traditional students is 18 to 24 years (while pursuing an undergraduate degree); nontraditional students are usually 25 or older.

Choy (2002) and Horn (1996) discussed age as a common defining characteristic of nontraditional students; however, the authors eliminated age altogether in their operational definition. The degree to which a stu-

dent was nontraditional, i.e., minimally, moderately, or highly, was determined by a possible seven alternative characteristics: attending part-time, financial independence, single parenthood, having dependents, working at least 35 hours a week, delaying college enrollment, and failure to receive a high school diploma. If the student had one characteristic, they were considered minimally nontraditional; if two or three, moderately nontraditional; and if four or more, highly nontraditional. This expanded definition results in the claim that nationally, “73 percent of all undergraduates were in some way nontraditional” (Choy, 2002, p. 1; Horn, 1996). In the researchers’ opinions, this expanded definition casts the nontraditional net too broadly, creates redundancy across categories, and creates a less meaningful research construct.

The varied definitions extant for nontraditional students posit important questions. What is it about the lives of older adults that dramatically impacts their educational experience and pursuit of an undergraduate degree? The current researchers submit it is life commitments, including child-rearing and full-time work constraints that limit time and opportunity to pursue a degree and engage in campus activities, not just age, although age is often associated with additional constraints. Additionally, it is believed that older adults experience psychological constraints that make campus encounters more complicated.

As stated previously, the most common definition in the literature is based on age alone (usually 25 or older). However, younger students may also take on regular, full-time work during the academic year and have child-rearing responsibilities while completing their undergraduate education. Given the major impact these life decisions have on time available for college study and the fact that most college students take on these responsibilities later in their adult life, this study includes younger students with older adult responsibilities in a revised definition of nontraditional students based on life constraints. This expands the common age-based definition while delimiting the broader definition suggested by Choy (2002) and Horn (1996).

Literature Review

The literature review below summarizes studies that have assessed educational outcomes in the areas of college satisfaction, student success (as measured by GPA), and student perceptions of learning. This is followed by the methods section, current study findings and discussion.

College Satisfaction

Student college satisfaction is an educational outcome examined by higher education institutions to evaluate whether nontraditional students are as satisfied with their educational experience as traditional students and to identify areas of program improvement. Although measures of satisfaction typically do not focus on learning but rather on a feeling of approval or contentment, they have often been used in higher education to evaluate programs. Several studies in the literature show little to no difference in overall college satisfaction between nontraditional and traditional students (Donohue & Wong, 1997; Kasworm & Pike, 1994; Landrum, Hood & McAdams, 2001). Anolik (1980) reported no significant differences between nontraditional and traditional students on scales measuring overall satisfaction with the faculty and administration. Rosenthal et al. (2000) demonstrated no significant differences between nontraditional and traditional students in overall satisfaction with student-faculty exchanges. When there were differences between student groups, they occurred among subscales and in questions evaluating more specific aspects of the college experience such as course work, class-room participation, professor concern, social activities, sororities and fraternities, religious organizations, campus safety and lighting, and financial aid services (Anolik 1980; Landrum et al., 2001).

Academic Success

Academic success, typically measured by college grade point average (GPA) is a proxy variable for overall learning that does not assess specific learning outcomes; nevertheless, it is used in many studies. In a meta-analysis of over 300 studies generally using GPA as the proxy variable, Kasworm (1990) found that the academic success of nontraditional students was greater than or equivalent to traditional students.

More recent studies found that nontraditional students experienced greater academic success as measured by college GPA compared to traditional students (Eppler & Harju, 1997; Kasworm & Pike, 1994; Spitzer, 2000). A number of factors predictive or associated with college GPA were ACT scores, high school grades, faculty-student interaction, involvement, and satisfaction (Kasworm & Pike, 1994); gender, self-regulation, social support, social acceptance, and global self-worth (Spitzer, 2000); learning goal orientation, SAT scores, and hours of employment (Eppler & Harju, 1997).

Student Perceptions of Learning

Although survey questions are indirect measures and involve students' subjective perceptions, they have been utilized to evaluate specific learning outcomes for nontraditional students. In a study by Graham and Donaldson (1999), the authors reported that perceived growth and development for nontraditional students was equal to or surpassed levels reported by traditional students on five factors. These five factors, developed from subscales on the ACT College Outcomes Survey (COS), included: broadening one's intellectual interests, critical thinking skills, enhancing study skills, understanding and applying science and technology, and career development. In contrast to the Graham and Donaldson (1999) study, Lundberg (2003) reported that learning (a 22-item composite variable) was inversely related to age, with younger groups showing higher levels of learning than older, nontraditional student groups. Variables associated with learning included part-time status, employment, peer teaching, peer discussion, quality of relationships with faculty and administrators, and student-faculty interaction.

Student Involvement

The literature shows that student involvement impacts learning outcomes. In the Graham and Donaldson (1999) study cited above, traditional students participated more in clubs and on-campus events than older, nontraditional students; however, the researchers did not investigate whether increased time spent on-campus would yield even higher levels of development for nontraditional students. Graham and Gisi (2000) investigated the effects of this involvement in a follow-up study using the same survey data and student groups and discovered that nontraditional students who spent more time engaging in college activities reported higher levels of learning (intellectual growth, problem solving, career development, and scientific reasoning).

Methodology

Defining Nontraditional Students

As previously stated, the authors of the current study established their own theoretical construct not used in previous research. The definition of a nontraditional student used in this research retained three levels or degrees of a nontraditional student similar to Choy (2002) and Horn (1996), but used only two of their seven characteristics (i.e., full-time work and children) and reintroduced age (25 years or older) as a third.

In this study, if a student possessed one characteristic, they were minimally constrained; two, moderately constrained; and three, highly constrained.

Sample and Survey Data

Data for the current study were taken from a representative university's Senior Survey conducted by the institutional assessment office. The total number of respondents was 9,353, and the survey data covered three academic years with the following response rates: 2004-2005 (26%), 2005-2006 (44%), and 2006-2007 (44%).

The university is a large private institution affiliated with a religious organization. Seniors were almost evenly distributed by gender, predominantly white (over 90%), slightly more than half were married, and about one-fifth had children. Respondents by college approximated the percentage graduating from each college, and the characteristics of respondents were similar to the senior population.

The survey instrument was developed in-house by the institutional assessment office and contained a wide range of questions (about 200). The current study utilized data from selected objective questions (demographics, participation in specific academic and extracurricular activities, and interaction with faculty) and questions measuring psychological constructs (satisfaction and perceptions of learning). The questions are specified in the tables and results section. Although the reliability of questions measuring constructs could be improved with the use of subscales (Spector, 1992), the data still provide informative results.

Statistical Analyses

Statistical analysis conformed to the guidelines established by Keppel (1991) and Levine, Krehbiel, and Berenson (2003). Due to the smaller number of respondents in the highly-constrained category, the categories representing moderately and highly-constrained nontraditional students were combined for analyses.

When examining differences in means between nontraditional and traditional students on perceptions of learning across the 24 areas, the analysis involved multiple comparisons with a Dunnett test. A t-test was used for satisfaction and GPA to examine differences between means.

Several survey questions asked seniors to report whether or not they participated in various extracurricular and social activities or interacted with faculty. For these questions, a Z-test for the difference between two proportions was used to compare each nontraditional group separately against the traditional student group.

Due to large sample sizes, even trivial differences between student groups were statistically significant; therefore, study findings highlight only those areas where there was a statistically significant and meaningful difference between groups. Graham and Donaldson (1999) used a similar methodology and surveyed the literature to create benchmarks for comparing mean scores among nontraditional and traditional age groups. Referencing their benchmarks, the current study highlights mean differences of at least a .2 on the Likert scales. Differences of at least 5 percent were also considered meaningful for categorical questions.

Differences in Educational Outcome

Perceptions of Learning

Table 1 shows students' perceptions of learning across 24 specific areas, with no differences or only very small differences between nontraditional and traditional student groups. Despite age, full-time work commitments, or the need to care for children, nontraditional students reported that they learned as much as traditional students across the full range of learning outcomes. These results conflict with the 2003 Lundberg study where younger students reported higher levels of learning compared with older adults, but supports findings from other studies (Graham & Donaldson, 1999; Kasworm & Pike, 1994).

Satisfaction and GPA

In addition to reporting on perceptions of learning, students responded to the prompt, "Rating of Overall Education Experience" on a four-point scale ranging from poor to excellent. The averages were as follows: traditional students 3.5, minimally-constrained nontraditional students 3.6, and moderately to highly-constrained nontraditional students, 3.5. Thus, there were no substantial differences between nontraditional and traditional student groups on satisfaction with their overall educational experience, which supports findings from earlier studies (Anolik, 1980; Donohue & Wong, 1997; Kasworm & Pike, 1994; Landrum, et al., 2001; Rosenthal et al., 2000).

The cumulative GPA for traditional and minimally-constrained nontraditional students was 3.48 and 3.45 respectively compared with 3.35 for moderately to highly-constrained nontraditional students, showing no meaningful differences in GPA. This result supports the findings of other studies showing equivalent or higher GPAs for nontraditional students compared with traditional students (Eppler & Harju, 1997; Kasworm, 1990; Kasworm & Pike, 1994; Spitzer, 2000).

Table 1
Differences in Learning Outcomes by Student Group(1)

Items	Student Groups		
	Mean(2)	Mean(3)	Mean(4)
Achieved learning outcomes in major	4.1	4.1	4.1
Thinking skills	4.4	4.4	4.4
Moral reasoning	4.0	4.0	4.0
Intellectual self-awareness	4.1	4.2	4.1
Quantitative reasoning skills	4.1	4.0	4.1
Listening skills	4.0	4.1	4.0
Speaking and presentation skills	4.1	4.1	4.1
Writing skills	4.1	4.2	4.2
Reading skills	3.9	4.0	3.9
Possess historical perspective	3.7	3.8	3.8
Understand, use, and appreciate science	3.8	3.8	3.9
Appreciate and enjoy excellence in the visual and performing arts	3.8	3.9	3.7
Understand and appreciate literature	3.7	3.8	3.7
Possess informed awareness of the people, cultures, languages, and nations	3.9	4.0	3.8
Develop confidence in major area	4.4	4.4	4.4
Value physical, mental, and emotional health	4.0	4.1	4.0
Maintain healthy relationships with others	4.0	4.0	4.0
Develop desires and skills needed for life-long learning	4.2	4.3	4.2
Use technology effectively	4.1	4.0	4.0
Community service and involvement	3.6	3.6	3.5
Strive to develop Christ-like character	4.1	4.2	4.1
Competence in studying, interpreting, and applying scripture	3.9	4.0	3.9
Relationship with God and religious identity	4.2	4.3	4.2

(1) Scale for the means: 1 = Detracted, 2 = Had no effect, 3 = Slightly enhanced, 4 = Enhanced, 5 = Strongly enhanced.

(2) Traditional Group, n = 2,468.

(3) Minimally Constrained Group, n = 2,661.

(4) Moderately to Highly Constrained Group, n = 845.

Student Involvement

As mentioned, student involvement on campus is often viewed by higher education institutions as an important learning opportunity for students. Earlier studies found that older nontraditional students were less involved in extracurricular activities than their younger counterparts (Graham & Donaldson, 1999; Graham & Gisi, 2000; Kasworm & Pike, 1994; Lundberg, 2003). Our research replicates this result for moderately to highly-constrained nontraditional students, but not for the minimally-constrained group.

One of the principal ways in which students are involved on campus is through their interaction with faculty. In this study, nearly all students, nontraditional and traditional, reported having conversations with faculty members outside of class (about 82% or more), but moderately to highly-constrained nontraditional students were less likely to have worked regularly with a faculty member outside of class (28%) compared with traditional students (38%) (see Table 2).

Moderately to highly-constrained nontraditional students were less likely than traditional students to participate in other academically-related activities such as organized off-campus study opportunities (10% versus 17%) and forums, seminars, galleries, and recitals related to their major (49% versus 56%). They were also less likely to attend devotionals (81%) than traditional students (86%).

Internships and service opportunities are often a way for students to apply what they have learned in the classroom to real-world experiences. Moderately to highly-constrained nontraditional students were less likely to participate in organized community service (61%) compared with traditional students (71%).

Although social events may have less of an impact on learning outcomes, they still present students with learning opportunities. Only 78% of moderately to highly-constrained nontraditional students attended informal social events with roommates or other students and only 73% attended organized social events on campus compared with 90% and 83% of traditional students respectively.

Discussion

Definition

The comparability of research on educational outcomes for adult learners is complicated by inconsistent definitions across studies and throughout the literature. The authors consider the definition of nontraditional students by Choy (2002) and Horn (1996) too broad but the traditional age-only definition too narrow. Why not define nontraditional

Table 2
Student-Faculty Interaction

Items	Student Groups		
	<i>Traditional(1)</i>	<i>Minimally(2)</i> Constrained	<i>Moderately(3)</i> to Highly Constrained
Conversation with a faculty member outside of class	85.5	85.7	81.8
Work regularly with a faculty member outside of class	37.5	35.2	*27.6
<i>Other Academic Activities</i>			
Study or discussion groups	84.4	84.4	81.9
Organized off-campus study opportunities	16.6	19.8	*10.2
Forums, seminars, galleries, recitals, etc. related to your major	55.6	56.4	*49.0
Devotionals	86.2	86.9	*80.9
<i>Internships & Community Service</i>			
Off-campus internships	40.5	38.8	35.7
Being of service to others on an individual basis	83.4	85.3	81.4
Organized community service	70.7	69.7	*60.9
<i>Social Events</i>			
Informal social events with roommates or other students	90.4	89.6	*77.9
Organized Social Events	83.4	84.1	*72.9

(1) n = 3,448

(2) n = 3,629

(3) n = 985

students by life constraints (age, children, and full-time work) as the authors did in this study?

If the definition of a nontraditional student is too broad, younger, traditional students without life constraints may be combined with older, nontraditional students who are experiencing constraints. For example, students who are 18 to 24 years old and attend part-time for reasons other than work or children, or who delay their education for even less than

a year, earn a GED certificate rather than a high school diploma, or are a ward or orphan of the state are considered nontraditional students by Choy (2002) and Horn (1996). Should students really be considered nontraditional for these reasons? Defining students in this way for research on adult learners may result in no significant differences between groups even though they may exist. Also, this distortion could occur if younger students with constraints (e.g., children or full-time work responsibilities) are grouped with traditional students. Until the field comes to some agreement about what defines a nontraditional student, research findings will be confounded. This definition of a nontraditional student merits further research and discussion.

Enhancing Learning Outcomes

Developing educational programs that meet the needs of adult learners can enhance their engagement in the learning process and learning outcomes. According to Knowles's (1978) theory of adult learning or "andragogy," educators should provide learning experiences where adults can apply concepts and knowledge to present problems, use prior life experience as a resource for learning, and have responsibility for deciding on what will be learned in the classroom. Speck (1996) explains further that learning experiences are enhanced when they are applied to students' work situations and daily practice with structured feedback and opportunities to participate in small groups to share and reflect on the material in a supportive learning environment. Rather than focusing on remembering facts and information, higher order thinking skills such as analysis, evaluation, synthesis or creation improves student learning outcomes (Bloom, 1956; Anderson & Krathwohl, 2001). Although a full review of adult learning theory is beyond the scope of this discussion, educators should also consider alternative learning styles (Kolb, 1984), multiple intelligences (Gardner, 1993), and other learning frameworks (Illeris, 2002).

Nontraditional students also need the flexibility offered by various alternative programs to balance family, work, and educational demands on their time. Without programs such as evening and weekend classes, degree completion programs, independent study, and distance learning options, nontraditional students will often lack access to programs or may drop-out (Hoyt & Allred, 2008; Hoyt, Howell & Young, 2009; Moore & Kearsley, 2005).

There is concern that nontraditional students are less involved in extracurricular activities and with faculty than traditional students. Al-

though adult learners may compensate for less involvement by more engagement with course materials to achieve higher GPAs or as a result of more life experience, studies provide support that more involvement by nontraditional students is associated with increased learning (Graham & Gisi, 2000). Greater nontraditional student involvement in the campus experience may be promoted by offering programs and activities during the evenings and weekends, making events more family friendly, encouraging nontraditional student involvement with faculty (in undergraduate research, advising, and other campus activities), emphasizing the value of these events and activities during orientation or through other printed materials and announcements, and inviting nontraditional students to attend.

The Council for Adult and Experiential Learning, American Council on Education, National Commission on the Future of Higher Education, and regional accrediting bodies advocate or require that institutions assess educational outcomes for adult learners, not only on measures of student success and satisfaction but on other areas of student learning (Crow, 2007; Noel-Levitz & Council for Adult and Experiential Learning, 2003; Simpson, 2004). The learning outcomes evaluated in this study provide an example of many areas that can be assessed for student learning.

A limitation of this study is that it relies on data that measures student perceptions, which may not always be entirely accurate. This reinforces the national impetus for direct measures of learning such as scores on comprehensive exams, pass rates on licensure/certification or standardized tests, employer ratings of graduates' skills, and scores on student work and performances (Crow, 2007; Suskie, 2004). Studies that assess these direct measures could be addressed in future research on nontraditional students.

Conclusion

This study found no substantial differences in satisfaction, academic success, and perceptions of learning between minimally to highly-constrained nontraditional and traditional students. These results lend support to the argument that nontraditional students have satisfactory and successful educational experiences and learn as well as traditional students in the college environment despite any life constraints such as age, full-time work, and children.

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