

Measuring Student Learning Outcomes Using the SALG Instrument

Kathleen Scholl

University of Northern Iowa

Heather M. Olsen

University of Northern Iowa

Abstract

U.S. higher education institutions are being called to question their central nature, priorities, and functions, with prominent and unprecedented attention being given to accountability and the measurement of student learning outcomes. As higher education evolves in how it assesses student learning and leisure studies and recreation departments adheres to its accreditation requirements, it has not always been clear, as a faculty member, as to which data sources and methodologies to employ. The purpose of this paper is two-fold: a) to briefly review the recent history of two opposing assessment movements influencing today's academic institutions and their programs with a particular emphasis on assessment's role in student learning outcomes, accountability, and accreditation requirements; and b) to describe one recreation department's initial steps to measure student learning outcomes for Council on Accreditation of Parks, Recreation, Tourism and Related (COAPRT) accreditation requirements through the use of the Student Assessment Learning Gains (SALG) instrument.

Keywords: *student learning outcomes; Student Assessment Learning Gains (SALG) instrument; teaching-learning assessment; accountability; higher education*

Kathleen Scholl and **Heather M. Olsen** are associate professors in the School of Health, Physical Education, and Leisure Services, Division of Leisure, Youth, and Human Services University of Northern Iowa. Please send correspondence to Kathleen Scholl, School of Health, Physical Education, and Leisure Services, Division of Leisure, Youth, and Human Services University of Northern Iowa, Wellness Recreation Center, 213 University of Northern Iowa, Cedar Falls, IA 50614-0241, 319-273-6316, kathleen.scholl@uni.edu

Changes and challenges facing higher education today are comparable in significance to other periods of transformation in the nature of the American colleges and universities (Leveille, 2006). The advent of land-grant institutions through the Morrill Act of 1862 challenged traditional and elitist American colleges to broaden the scope of their classical curriculum in order to democratize and open a higher educational system to a wider constituent (Eckert, 2012; Turner, 1984). During the years following World War II, U.S. colleges and universities experienced another great transformation, when the research university evolved to serve a mass working and middle class population to meet American postwar technical, economic, and social needs (Leveille, 2006; Trow, 2005). From 1955 to 1970, the number of students attending American colleges and university rose from 2.5 million over 7 million (Bowman, 2011). By 2009, 20.4 million students were enrolled in 2- or 4-year colleges and universities (Snyder & Dillow, 2011). By 2019, enrollments are expected to rise 9% for students under age 25, and a rise of 23% is expected for student over the age of 25 (Snyder & Dillow, 2011). Continued enrollment growth, society and technology changes, and institutions redesigning themselves for increased universal and open access has created an ever more diverse and complex U.S. educational system. In the haze of this current transformative period, U.S. higher education institutions are again called to question their central nature, priorities, and functions, with prominent and unprecedented attention being given to accountability and the measurement of student learning outcomes (Brint, 2009; Leveille, 2006; Liu, Bridgeman, & Adler, 2012; Trow, 2005).

The purpose of this paper is two-fold: a) to briefly review the recent history of two opposing assessment movements influencing today's academic institutions and their programs with a particular emphasis on assessment's role in student learning outcomes, accountability, and accreditation requirements; and b) to describe one leisure and recreation department's initial steps to measure student learning outcomes for current Council on Accreditation of Parks, Recreation, Tourism and Related (COAPRT) accreditation and program review requirements through the use of the Student Assessment Learning Gains (SALG) instrument.

Opposing Assessment Ideologies

The demand for direct assessment of student learning and academic accountability is not new. For years now, numerous stakeholders (employers, industry, taxpayers, tuition payers, governmental officials and state regulators, trustees, accreditation organizations, including those from within universities) have driven the current changes in student assessment by questioning what constitutes quality undergraduate education and how it should be measured (Arum, 2013; Leveille, 2006; Liu, 2011; Williams, 2008). In the 1970s and 1980s, critical voices regarding government waste, and ideologies of public responsibility and sound fiscal investment circulated. National educational reports argued that to improve undergraduate curricular pedagogy and to judge higher education effectiveness, states needed to intervene into college classrooms and collect evidence of student learning (Brint, 2009; Brittingham, 2009; Ewell, 2008). In response, a handful of colleges and universities voluntarily began designing systematic student learning assessment models. These early methods included a) abilities-based curriculum in which students demonstrate mastery of specific interdisciplinary competencies by means of incremental performance assessments, b) value-added testing using standardized examinations to evaluate academic achievement, and, c) performance funding scheme based on "a comprehensive department level assessment program structured around academic program review" (p.8). These early

models are now foundational features of the current student learning assessment movement (Brint, 2009; Ewell, 2008).

In the 1990s, stakeholders continue to fear loss of global economic competition, loss of leadership in young adults attaining postsecondary degrees, declining achievement on domestic and international high-level literacy assessments, and high and rising tuition, textbooks, and student loan interest rates (Derthick, & Dunn, 2009; Ewell, 2008; Volkwein, 2010a). As high-profile policy makers put more pressure on academic institutions, States mandated more evidence of student academic achievement. Gradually, state mandates were facilitated by regional accrediting agencies. Even though regional accrediting bodies are organized as independent, quality assurance agencies and directed by academics and former academics, these agencies are subject to state and federal recognition. As a condition of recognition, accrediting organizations began planning ways to directly access evidence of student academic achievement through examining student learning outcomes (Brint, 2009; Ewell, 2008). Distinct attitudes toward appropriate approaches to assessment and implementation became more evident and an ideology division towards this new “culture of evidence” within higher education continued to amplify (Arum, 2013; Ewell, 2008; Leveille, 2006; Liu, Bidgeman, & Adler, 2012; Lubinescu, Ratcliff, & Gaffney, 2001; Volkwein, 2010a). Two distinct and opposing paradigms have been expressed as (a) the teaching-learning assessment approach; and, (b) the accountability approach (Brint, 2009; Ewell, 2008; Leveille, 2006; Volkwein, 2010a).

Teaching and learning assessment approach. Rooted in foundation-supported advocacy organizations such as the American Association of Colleges and Universities (AAC&U), Carnegie Foundation for the Advancement of Teaching (CFAT), and the Scholarship of Teaching and Learning (SoTL) colloquia, the teaching and learning assessment approach is viewed as an informative process to advance pedagogical principles (Brint, 2009). The teaching and learning assessment approach focuses on continuous improvement using various qualitative and quantitative assessment methods to gather data for internal purposes for the enhancement of student-centered learning and growth (Allen, 2006, p.1). Suskie (2009) discussed assessment as an ongoing process to provide feedback and guidance for faculty to reflect on their teaching process, to understand their impact and influence on students as to whether or not students learned, and use the results to subsequently analyze how improve their students’ learning. By establishing clear teaching infrastructure of identifying measurable outcomes, students have the opportunity to achieve the learning outcomes and meet course requirements through instructor feedback and advice (Williams, 2008). In the SoTL approach, the academic is both the facilitator and the assessor of student learning acting within the process of teaching and learning.

The accountability approach. In contrast, the accountability approach primarily evolved from state and federal accreditation recognition requirements calling for academic institutions to externally demonstrate to policymakers and the public of proper compliance, transparency, cost containment, and effective use of government funds in educating to be worthy of continued support. In the midst of Elementary and Secondary Education reform of NCLB, the Commission on the Future of Higher Education was established in 2005 by the Department of Education (DOE) and led by appointed Secretary of Education Director, Margaret Spelling. In 2006, the Commission’s first report (the Spelling Report) noted significant problems throughout higher education that needed urgent reform (Brint, 2009; Derthick & Dunn, 2009; Ewell, 2008; Liu, 2011; Liu, Bridgeman, & Adler, 2012).

Citing a long list of educational failures, Spelling was especially critical of accreditation as being ineffective in providing reliable information about institutional quality and its excessive focus on institutional inputs while neglecting student learning outcomes (Ewell, 2008; Spelling, 2006). The Spelling Report's high-profile attention convinced a significant proportion of college and university presidents that a proactive response on accountability was needed from higher education institutions (Ewell, 2008). Arum & Roksa's (2011) recent research report on outcomes assessment, *Academically Adrift*, also made critical claims about the current state of U.S. higher education. With today's expectations for U.S. higher education institutions and its programs to collect evidence of student learning, the primary goal of the accountability assessment approach is to compare an institution's ratings against national and peer-databases, transmitting official numbers to government agencies and guidebooks for student recruitment purposes on graduation and retention rates, measures of student satisfaction and engagement and at least one standardized measure on students' critical thinking and communication proficiency. Comparatively, the accountability approach places a greater reliance on standardized test to collect evidence compared to data collection methods of the internal, teaching and learning assessment approach (Ewell, 2008).

In the wake of the Spellings Commission report, there have been numerous organizations formed to support the push toward assessment. Specifically, in 2008 the *National Institute for Learning Outcomes Assessment* (NILOA) was formed to support academic programs and institutions to use assessment data to strengthen undergraduate education, internally communicate with faculty and programs, and externally communicate with policymakers, students, and their families (NILOA, 2012). The NILOA presents helpful and practical examples for faculty to determine whether students are really learning and truly understanding key educational concepts (Hutchings, 2011). Established in 2009, the *Association for the Assessment of Learning in Higher Education* (AALHE) was formed to assist interested parties in using effective assessment practice to improve student learning (AALHE, 2011). Similar to NILOA, AALHE provides faculty with strategies and methods for using assessment to document and improve student learning. It is also important to mention The Higher Learning Commission has implemented an Academy for Assessment of Student Learning (Higher Learning Commission, 2013). The Academy for Assessment of Student Learning offers institutions who are members of the Higher Learning Commission a four-year sequence of events focused on improving student learning by building an assessment procedure for the institution to assess, confirm, and improve student learning (Higher Learning Commission, 2013).

Role of Accreditation Associations and Organizations in Student Assessment

The proliferation of land-grant, research, women, black, bible, art, work, and military schools, colleges, universities and academies during the late 19th century began the formation of regional accrediting associations in order to identify which institutions in the region were legitimate (Brittingham, 2009). As accreditation organizations evolved, they needed a coordinating and accrediting body evaluator. Since 1949, a number of coordinating organization have existed, however, since 1996, the Council for Higher Accreditation (CHEA) has been the organization that today 'accredits the accreditors' (Winskowski, 2012, p.23). Additionally, many accrediting organizations' also had a relationship with the U.S. Department of Education (USDE). This relationship evolved significantly after the President Lyndon B. Johnson signed into legislation the Higher Education Act (HEA)

of 1965 that greatly expanded the federal financial aid available to assist students attend colleges and universities. Early on, the government recognized accrediting organizations as a reliable method to identify creditable institutions educationally worthy of the billions of tax payer dollars annually invested in federal financial aid (Brittingham, 2009). HEA has been reauthorized nine times since 1965 and is up for reauthorization again when it expires at the end of 2013. Each time Congress reauthorizes, it makes amendments to its language, policies, and programs.

Today, accreditation and quality assurance activities are focused on three major levels: institutional, programmatic, and individual (Volkwein, 2010a). At the institutional-level or campus level, USDE, CHEA and the Accrediting Council of Independent Colleges and Schools (ACICS) sets the standards that regional, national faith-related, national-career related and program accreditors must meet to be recognized. Regional accreditation reviews are typically conducted on a 10-year cycle. For academic institutions to be accredited, they are expected to gather and present evidence that it is accomplishing its educational goals and producing improvement both inside and outside of the classroom. Areas that educational institutions must assess include general education curriculum, teaching effectiveness, academic advisement, mentoring, experience of new students, and residential life. The old accreditation philosophy, most dominant before the 1980s, encourages institutions to maximize the quality of the inputs in order to guarantee the quality of the outputs. The new accreditation review process, growing in strength since 1990, encourages institutions and their stakeholders to measure the outcomes in order to judge the results or effectiveness of educational programs and the quality of the institution. Critics argue that too much focus on performance outcomes, like academic achievement, retention to matriculation or graduation rates, and faculty publications may not provide the information needed for internal program development, continual student educational improvement and enhancement (Brittingham; 2009; Volkwein, 2010a).

The next level of quality assurance activity focuses at the programmatic-level. For example, there are over 90 specialized academic and vocation accrediting bodies recognized by either USDE or CHEA or both entities (Council for Higher Education Coalition, 2013). These programmatic accrediting organizations, like the COAPRT and first established in 1974 (Neipoth, 1998), scrutinize and accredit officially recognized specialty academic programs (medicine, law, business, teacher education, parks and recreation, etc.). Programmatic reviews typically occur every five years. Most higher education institutions are supportive and eager for their programs to meet these standards set by professional organizations because “accredited programs attract the best students, as well as federal and state funding” (Volkwein, 2010a, p. 6).

Finally, receiving certification as a Certified Park and Recreation Professional (CPRP), Certified Park and Recreation Executive (CPRE), Aquatic Facility Operator (AFO), Certified Playground Safety Inspector (CPSI), or Certified Therapeutic Recreation Specialist (CTRS) through a professional organization such as the National Recreation and Park Association (NRPA) or National Council on Therapeutic Recreation Certification (NCTRC) are examples of individual-level credentialing for professionals and practitioners within a professional field.

As higher education evolves in how it assesses student learning and leisure studies and recreation education programs and department adheres to its accreditation requirements, it has not always been clear, as a faculty member, as to which data sources and methodologies to employ. What kinds of evidence are acceptable? How is the data to be used (enrollment

growth, student-centered learning and feedback of intellectual, personal or social development, satisfy demands of external audiences, etc.)? What decisions are being made in relation to the data? And at what level (individual student, class, program, department, etc)? By clarifying the varied purposes of assessment, the Student Assessment of Learning Gains (SALG) instrument may be one of many assessment practices that can assist faculty in gathering data for both teaching and learning feedback as well as accountability measures for external audiences.

SALG Instrument Format

The Student Assessment of Learning Gains (SALG) instrument is a free, online instrument first developed in 1997 by Elaine Seymour while she was co-evaluator for two funded grants through the National Science Foundation. The instrument was revised in 2007 to better reflect the goals and methods used in a broader array of disciplines. Traditional higher education student course evaluations ask students rank their satisfaction with the faculty's ability to create a learning atmosphere, evaluate fairly, and communicate effectively. Alternatively, the SALG instrument seeks to aggregate data on student-reported learning outcomes within specific content areas e.g., student understanding, skills, cognition, attitudes, integration of learning, and motivation toward the subject in areas that the instructor identifies as relevant to the learning activities and objectives of the course (see Table 1).

Table 1

Summary of SALG'S Five Overarching Questions (SALG, 2013)

SALG's Questions	Examples
How much did the following aspects of the course help you in your learning?	Class and lab activities, assessments, particular learning methods, and resources
As a result of your work in this class, what gains did you make in your understanding?	Important course learning objectives and concepts.
As a result of your work in this class, what gains did you make in the following skills?	Writing technical reports, problem-solving, analyzing research, preparing budgets
As a result of your work in this class, what gains did you make in the following?	Enthusiasm and attitude for the course or subject area.
As a result of your work in this class, what gains did you make in integrating the following?	Incorporation and integration of information.

Within each category of questions, students provide quantitative ratings on statements about the degree to which specific course attributes supported or contributed to their learning. Each category of questions also allows students to include written responses about the course focus, learning activities, content, and materials. As the course instructor customizes their assessment instrument, SALG allows the flexibility to modify, add, and delete sub questions. Instructors can use the instrument for baseline, formative, or

summative purposes. The SALG site currently reports 8,933 instructors have used the instrument, 4,874 instruments have been developed, and 187,248 students have responded to the instrument (SALG, 2013).

Implementation of SALG

In the fall of 2011, the SALG Learning Instrument was initially incorporated into two required undergraduate leisure, recreation, and park courses at a midwest university: (a) Leadership in Leisure, Youth, and Human Services, and; (b) Research and Evaluation in Leisure, Youth, and Human Services. At the time, the SALG learning instrument was selected because the university's Office of the Executive Vice President and Provost sought faculty to administrate the SALG instrument to students. The timing was fortuitous as it coincided with the upcoming 2013 COAPRT accreditation changes for undergraduate programs in the field of recreation and parks (NRPA, 2013).

Leadership in Leisure, Youth, and Human Services is one of the first courses student take who are interested in the major. The average class size is approximately 30 students. The SALG instrument was first implemented in two course section during the spring of 2012, then again in the fall of 2012 and spring 2013. To date, 121 undergraduate students who have been taken Leadership in Leisure, Youth, and Human Services have completed the instrument. The Leadership in Leisure, Youth, and Human Services course learning outcome is to provide students with the principals, theories, and techniques for effective leadership of programs, activities, employees, and volunteers. The questions developed followed the SALG framework of categories supporting student understanding, skills, attitudes, integration of learning, and professional practice with the concept of leadership. The instrument was given prior to start of the instructor facilitating course content (base line data used as a pre-survey) and again after the course was completed (post-survey).

Three semesters of pre-post data were collected in the Research and Evaluation in Leisure, Youth and Human Services course using the SALG instrument: fall 2011, spring 2012, and spring 2013. This course provides an overview of the processes of research and evaluation as encountered in leisure services and has three major course prerequisites prior to enrollment. Major students typically take this required course when they have reached senior status with 25–30 enrolled each semester. The course learning outcome is for students to be able to successfully collect, analyze, synthesis, and interpret research data and report findings and conclusions regarding the process and outcomes of leisure, youth and human service programs. The online pretest was available to students for 12 days at the start of the semester. Students completed the posttest through the SALG website the last two weeks of the semester. Typically, one would conduct a paired t-test with a pre-post design. However, the SALG site only identifies the individual students who have responded to the instrument and does not provided the instructor the ability to link a specific student with their individual responses. Therefore, an independent t-test was used to assess pre- and post-test student learning gains on student conceptual understanding, research and evaluation skills, attitude toward the topic, and integration of learning. Differences between the three Research and Evaluation courses and selected attributes were identified by using ANOVA analysis by uploading SALG data into Statistical Packages for the Social Sciences (SPSS). Only the Research and Evaluation Course data is presented in this paper as an example for those interested in using the SALG instrument for measuring student learning outcomes because similar data analysis was also completed for the leadership course.

Results from Research and Evaluation Course

Demographic data was not collected yet there was a 64%–100% response rate depending on the data collection period. Fall 2011 course had 26 students enrolled, and 23 students completed the pretest and 24 students completed the posttest. In Spring of 2012, 25 students were enrolled in the course and 20 students completed the pretest, with 16 students completing the posttest. Most recently, 27 students were enrolled in the Spring 2013 course, and 24 completed the pretest and 27 completed the posttest. To get a 100% response rate, faculty designated class time while in computer lab on the last day of the semester to complete the SALG evaluation at the same time as the University's traditional student evaluation form was administered.

Baseline and Summative Results

Student conceptual understanding of course content. In comparing the mean score of the pretest to posttest score, by combining all three semesters of students ($n=67$) and using an independent-samples t-test, there was a significant increase in students reporting content learning of developing, implementing, and reporting research and evaluation projects ($p < .01$). A one-way ANOVA was also conducted to compare differences between one group of students' baseline understanding of topic content compared to a different semester cohort of students' understanding. Results found that there was not a significant difference in one class pretest mean score compared to a difference semester course. Likewise, no significant differences were found between semester course post-scores. Table 2 illustrates, for each semester, the students' conceptual baseline and summative understanding of the specific learning goals for the Research and Evaluation in Leisure, Youth and Human Services course.

Student development of research and evaluation skills. The course skills involved students reviewing professional journals, narrowing the focus of evaluation project, developing a quantitative survey, designing the appropriate sampling method, collecting, coding, analyzing and reporting the data in a written report. Each semester, students indicated that they significantly increased their research and evaluation skills in this area ($p < .01$) (see Table 3). Additionally, a one-way ANOVA was conducted to compare differences between one group of students' baseline research skills compared to a different semester cohort of students' skills in nine skill areas (see Table 3). Although results found no significant difference in one class' pretest mean score compared to a difference semester course in eight of the nine research skills, the students enrolled in the 2012 spring semester course had significantly higher post-scores for their perceived ability to design valid survey or interview questions that align with my research and evaluation objectives ($F(2, 64)=5.374, p < .007$).

Student attitude about the topic. Each semester, students were asked to identify their confidence in understanding and conducting evaluation projects. Independent-samples t-test of each semester cohort found that the confidence significantly increased over the semester (see Table 4). On the other hand, their enthusiasm and interest in taking future classes in the subject area did not significantly change. A one-way ANOVA was conducted to compare differences between semester students' baseline and summative attitudes towards conducting research and evaluation project. Fall semester 2011 students had significantly less enthusiasm about the course subject matter than the Spring 2013 cohort ($F(2, 64) = 5.308, p < .007$). On the other hand, there was no significant post-score difference between the three semester courses. Open-ended responses from the summative survey indicated

that a number of students were apprehensive, nervous, or uninterested about the course topic while other students showed interest.

Table 2*Student Conceptual Understanding of Pre-Post Semester Results*

	F11 pretest	F11 posttest	Sp 12 pretest	Sp 12 posttest	Sp13 pretest	Sp13 posttest
<i>Presently, I understand the following concepts.....</i>						
How to develop a project that systematically evaluates leisure programs and services	3.39 (1.03)	5.04** (.55)	3.20 (.83)	4.88** (.81)	3.50 (1.10)	4.78** (.70)
How to systematically collect and analyze data that is appropriate for my research evaluation project	3.43 (1.08)	5.17** (.56)	3.10 (.97)	4.94** (.85)	3.42 (1.10)	4.96** (.65)
Understanding how to report my results and make appropriate recommendation based on the data results	3.22 (1.04)	5.08** (.72)	3.00 (.92)	4.81** (.75)	3.21 (.83)	4.67** (.73)
Research and evaluation ethics	3.04 (.98)	5.29** (.75)	2.90 (.97)	4.94** (.93)	3.38 (.97)	4.96** (.59)
How the concepts we will explore in this class relate to my career in this subject area	4.26 (.81)	5.21** (.78)	3.75 (1.41)	4.81* (.98)	3.96 (.75)	5.00** (.68)
How ideas we will explore in this class relate to my career outside of this subject area	3.96 (1.11)	4.88** (.99)	4.05 (1.15)	4.69 (.95)	4.04 (1.00)	4.81** (.68)
How studying this subject helps me to address real world issues and develop the skills I need in the Leisure, Youth and Human Services profession	4.04 (1.15)	5.04** (1.08)	4.10 (.91)	4.63 (.89)	4.21 (.98)	4.85** (.72)

Table 3*Student Research and Evaluation Skills Pre-Post Semester Results*

	F11 pretest	F11 posttest	Sp 12 pretest	Sp 12 posttest	Sp13 pretest	Sp13 posttest
<i>Presently, I can.....</i>						
Find articles relevant to a particular problem in professional journals or elsewhere	4.43 (.95)	5.00* (.78)	4.00 (.73)	4.94** (.85)	4.25 (.99)	5.41** (.69)
Critically identify and read articles that will support and guide my evaluation project	3.91 (1.00)	4.92** (.83)	3.55 (1.23)	4.81** (.83)	4.25 (.61)	5.11** (.75)
Design valid survey or interview questions that align with my research and evaluation objectives	3.48 (1.04)	5.46** λ (.59)	3.25 (.91)	5.06** (.57)	3.75 (.74)	4.96** λ (.52)
Design an appropriate method of sampling for an evaluation project	3.08 (.90)	4.96** (.81)	2.95 (1.00)	4.81** (.75)	3.38 (.97)	4.81** (.68)
Appropriately code and enter quantitative data	2.70 (.82)	5.17** (.64)	2.45 (.83)	4.75** (1.00)	3.08 (1.06)	4.85** (1.02)
Conduct basic data analysis	2.96 (1.07)	4.88** (.74)	2.45 (.69)	4.69** (.95)	3.00 (1.02)	4.93** (.78)
Identify patterns in data	3.61 (.89)	4.83** (.76)	2.90 (1.02)	4.69** (.87)	3.58 (1.02)	4.89** (.64)
Develop tables and graphs for reporting data	3.91 (1.12)	5.17** (.87)	3.65 (.81)	4.94** (.87)	3.54 (1.02)	4.74** (.71)
Write documents in discipline-appropriate style and format	3.17 (1.11)	4.85** (1.06)	2.60 (1.05)	4.31** (1.30)	2.96 (.75)	4.56** (.75)

Note: Likert Scale - 1=not applicable; 2=not at all; 3=just a little; 4=somewhat; 5=a lot; 6=a great deal)

*p < .05. **p < .01. Standard Deviations appear in parentheses below the means.

λ F(2,64) = 5.374, p < .007

Table 4

Pre-Post Semester Results of Students Attitude Toward Conducting Research and Evaluation Projects

	F11 pretest	F11 posttest	Sp 12 pretest	Sp 12 posttest	Sp13 pretest	Sp13 posttest
<i>Presently, I am.....</i>						
Enthusiastic about the subject	3.57 λ (.84)	3.75 (1.07)	3.85 (.88)	3.88 (1.03)	4.38 λ (.88)	3.96 (.81)
Confident that I understand the subject	3.35 (.98)	4.75** (.80)	3.35 (.93)	4.44** (1.15)	3.71 (1.00)	4.59** (.78)
Interested in taking or planning to take additional classes in this subject	2.79 (.95)	3.00 (1.35)	3.20 (.77)	3.44 (1.23)	3.25 (1.23)	3.30 (1.33)
Confident that I can conduct an evaluation or research project from start to finish	3.52 (1.16)	4.59** (.97)	3.10 (1.02)	4.44** (1.15)	3.88 (.99)	4.37* (.74)
Comfortable working with complex ideas	3.87 (1.06)	4.46 (1.10)	3.45 (.83)	4.31** (1.20)	4.00 (.78)	4.33 (.88)
Willing to seek help from others (teacher, peers, TA) when working on academic problems	4.70 (1.26)	5.17 (1.18)	5.00 (.91)	5.09 (.90)	5.13 (.90)	5.19 (.68)

Note: Likert Scale - 1=not applicable; 2=not at all; 3=just a little; 4=somewhat; 5=a lot; 6=a great deal)

**p < .01. Standard Deviations appear in parentheses below the means.

λ F(2,64) = 5.308, p < .007

Student integration of learning. Although there was indication that students increased their ability to connect course learning to other areas of their life (systematic reasoning and critical data analysis), overall pre-post independent-samples t-test did not indicate that the course content that students learned within the course was not applied to other situations beyond the research and evaluation class (see Table 5). Results from a one-way ANOVA analysis confirmed not difference between the semester groups for either baseline or summative scores. Post-test open-ended response confirmed that research knowledge and skills were the primary student learning gain, yet students could identify where they would use research and evaluation in future situations.

Table 5

Pre-Post Semester Results for Students Integration of Learning

	F11 pretest	F11 posttest	Sp 12 pretest	Sp 12 posttest	Sp13 pretest	Sp13 posttest
<i>Presently, I am in the habit of.....</i>						
Connecting key ideas I learn in my classes with other knowledge	4.35 (.93)	4.63 (.82)	4.45 (.69)	4.69 (.79)	4.67 (.64)	4.78 (.85)
Applying what I learn in classes to other situations	4.61 (.78)	4.96 (.75)	4.75 (.72)	4.69 (.79)	4.88 (.61)	4.93 (.83)
Using systematic reasoning in my approach to problems	3.83 (.98)	4.46* (1.15)	3.95 (.89)	4.63 (.89)	4.25 (.94)	4.74* (.66)
Using a critical approach to analyzing data in my daily life	3.96 (1.11)	4.29 (1.07)	3.90 (1.07)	4.56* (.81)	4.08 (1.06)	4.67* (.83)

Note: Likert Scale - 1=not applicable; 2=not at all; 3=just a little; 4=somewhat; 5=a lot; 6=a great deal)

*p < .05. Standard Deviations appear in parentheses below the means.

Student learning motivation toward Research and Evaluation Course. Students were asked to rate the amount of effort they plan to put into the course. Then three months later, rated the amount of effort they actually put towards the course. In all courses, the average mean score started high (“a lot”) but were lower at the end of the term, indicating that they had put in a fair amount of effort towards the course but not as much as they perceived to be necessary at the start of the semester (see Table 6).

Table 6*Pre-Post Semester Results of Students Learning Motivation toward Course*

	F11 pretest	F11 posttest	Sp 12 pretest	Sp 12 posttest	Sp13 pretest	Sp13 posttest
^a Pretest: How much effort are you planning to put into this course?	5.26 (.62)		5.25 (.55)		5.33 (.82)	
^b Posttest: How much effort did you put into this course?		4.71** (.55)		4.75** (.45)		4.48** (.58)

^aLikert Scale - 1=not applicable; 2=not at all; 3=just a little; 4=somewhat; 5=a lot; 6= a great deal

^bLikert Scale - 1=none; 2=a little; 3=some; 4=a fair amount; 5=a great deal; 9= not applicable

**p < .01. Standard Deviations appear in parentheses below the means.

Reflection on Student Learning Assessment

Teaching-learning assessment benefits of using SALG instrument. A semester before we incorporated the SALG instrument, the authors regularly meet to discuss student learning challenges, the lack of relevant information reported in teaching evaluations, and pedagogical changes we wanted to implement into the specific recreation courses we taught. Unfortunately, traditional teaching evaluations are designed to evaluate generic instructor effectiveness and primarily used for merit pay, tenure, and promotion decisions, providing no information on student learning. Using the SALG instrument as a pre-course survey provides background knowledge and understanding of our students as they enter the course. In addition, the SALG instrument allows each faculty to design a specific conceptual pedagogy assessment framework to measure the particular skills and knowledge the students are expected to acquire in different courses.

Second, good assessments offer the opportunity for feedback not only for instructor teaching, or curricular changes and innovations but for our students to construct their own meaning and understanding (Pintrich, 2004). The SALG instrument provides the students with an introduction to the course learning objectives. Specifically, students complete the baseline SALG at the start of the semester, enabling students to familiarize themselves with the course content. At the conclusion of the course, students complete a summative SALG assessment. This second assessment offers students time to reflect and assess their own learning over the semester through specific content knowledge and skills survey questions.

Third, there is an attraction for students to complete the student learning assessments instrument online versus traditional paper methods. With the number of plugged in students, online assessment is another opportunity to connect with today's students. Anderson, Cain, and Bird (2005) reported course evaluations that are administrated online provide prompt feedback, less expensive, require less class time, provide less opportunity for professional influence, and offer more time for students to complete the course evaluation.

There are some statistical problems with using quantitative measures like the SALG instrument however, particularly since differences in scores are subject to ceiling effects.

If students have high pretest scores, there is little room of the SALG instrument to show improvement compared with students lower initial scores. Similarly, student scores are also subject to regression effect.

Accountability benefits of using SALG instrument. SALG data allows faculty to not only use for internal classroom teaching benefits but also acquire information that can be used for different external audiences: voluntary reports to department heads and deans for additional evaluation material of faculty teaching and effectiveness; compliance to a university's academic program review procedures; or informing department strategic planning. Within department strategic planning meeting, colleagues asked why course grades are not enough. Volkwein (2010b) cites that "most university assessment committees conclude that grades in specific courses constitute necessary but not sufficient information about student attainment" (p. 107), reasoning that some faculty give grades on reaching a level of knowledge, other faculty grade on a curve, others assign grades on the basis of student effort and improvement, while other faculty will grade on students obtaining the learning goals embedded within the course. While grades provide specific information about students' performance on papers, assignments, exams, etc., course do not provide meaningful information about student learning success (Cartwright, Weinder, Streamer-Veneruso, 2009).

Faculty engagement in higher education assessment reform. Despite differing views and tensions that arise during any time of transition, higher education student assessment is a reality. No matter which view a faculty may philosophically align, we interpret the two assessment approaches presented in this paper to lie upon a continuum: SoTL assessment approaches for the instructor's internal use only on one end, and student assessment measures for external justification purposes and other institution requirements on the other end of the continuum. While there is no agreement about what constitutes educational effectiveness or appropriate student assessment measures (Terenzini, 1989; Volkwein, 2010a), the different roles of assessment can create confusion and tension especially when the administration does not provide adequate conceptual foundation about the purpose of specific student assessments.

As COAPRT leaves behind "curriculum content" standards to "student learning outcomes"-based assessment and higher education faculty are expected to incorporate various assessment measures into their pedagogical approaches, it is important for individual faculty and recreation departments to clarify and resolve why and for what purpose they are now asked to collect a widespread amount student data (e.g., faculty development and improvement for the SoLT, or evidence for external audiences to make bottom-line judgments). With today's expected teaching, research and service demands, engaging faculty in the assessment process needs to be accessible. If the data-collection process is too complex, assessing student learning outcomes, especially for external purposes, will be perceived as too time consuming and thereby become a low priority (Qualters, 2010). Therefore, the development of practical assessment tools and techniques to easily report student learning is necessary. In addition, as recreation departments participate in the COPART accreditation review process using the 2013 standards, faculty and accrediting visitors must impress on university administration the need to do a better job on their part in providing faculty with the student data they are already collecting (number of students entering and leaving the university, student GPAs, postgraduate employment, etc.). Diversifying between administrative offices and academic departments to create cooperative data sharing is essential (Volkwein, 2010b).

Given today's changes and challenges within this period of higher education reform, the SALG instrument is one recreation department's initial step to identify a possible assessment tool for understanding effective ways to measure student learning outcomes. As we sort our way through this current student assessment reform period, we hope that others will review the SALG instrument for its potential usefulness in accountability, accreditation, and continuous improvement endeavors.

References

- Allen, M. J. (2006). *Assessing general education programs*. Bolton, MA: Anker Publishing Company, Inc.
- Anderson, H. M., Cain, J., & Bird, E. (2005). Online student course evaluations: Review of literature and pilot study. *American Journal of Pharmaceutical Education* 69(1), 34–43.
- Arum, R. (2013). Stakeholder and Public Responses to Measuring Student Learning. *Society*, 1–6.
- Arum, R., & Roksa, J. (2011). *Academically adrift: Limited learning on college campuses*. University of Chicago Press.
- Association for the Assessment of Learning in Higher Education. (2011). *About us*. Retrieved on July 23, 2013 from <http://aalhe.org/about-us>.
- Bowman, A. (2011). Beyond the Ivory Tower: In Search of a New form for Campus-Community Relationships. Unpublished Master's Thesis: Massachusetts Institute of Technology.
- Brint, S. (2009). The Academic Devolution? Movements to Reform Teaching and Learning in U.S. Colleges and Universities, 1985-2010. UC Berkeley: Center for Studies in Higher Education. Retrieved from <http://cshe.berkeley.edu/publications/docs/ROPS.Brint.Classroom.12.18.09.pdf>
- Brittingham, B. (2009). Accreditation in the United States: How did we get to where we are? *New Directions for Higher Education*, 145, 7–27.
- Cartwright, R., Weiner, K., & Streamer-Veneruso, S. 2009. *Student Learning Outcomes Assessment Handbook*. Montgomery County, Maryland: Montgomery College.
- Council for Higher Education Accreditation. (2013). Recognized Accrediting Organization. Retrieved from http://www.chea.org/pdf/CHEA_USDE_AllAccred.pdf
- Derthick, M., & Dunn, J. (2009). False Premises: The accountability fetish in education. *Harvard Journal of Law and Public Policy*, 32(3), 1015–1034.
- Eckert, E. (2012). Examining the Environment: The Development of a Survey Instrument to Assess Student Perceptions of the University Outdoor Physical Campus (Doctoral dissertation, Kent State University).
- Ewell, P. T. (2008). Assessment and accountability in America today: Background and context. *New Directions for Institutional Research*, 2008(S1), 7–17.
- Higher Learning Commission. (2013). The Higher Learning Commission's Academy of Assessment of Student Learning. Retrieved from <http://www.ncahlc.org/Information-for-Institutions/academy.html>.
- Hutchings, P. (2011, April). *What new faculty need to know about assessment* (NILOA Assessment Brief: Faculty). Urbana, IL: University for Illinois and Indiana University, National Institute for Learning Outcomes Assessment.

-
- Leveille, D. E. (2006). *Accountability in Higher Education: A Public Agenda for Trust and Cultural Change*. UC Berkeley: Center for Studies in Higher Education. Retrieved from <http://escholarship.org/uc/item/38x683z5>
- Liu, O. L. (2011). Outcomes assessment in higher education: Challenges and future research in the context of Voluntary System of Accountability. *Educational Measurement: Issues and Practice*, 30(3), 2–9.
- Liu, O. L., Bridgeman, B., & Adler, R. M. (2012). Measuring Learning Outcomes in Higher Education Motivation Matters. *Educational Researcher*, 41(9), 352–362.
- Lubinescu, E. S., Ratcliff, J. L., & Gaffney, M. A. (2001). Two continuums collide: Accreditation and assessment. *New directions for higher education*, 2001(113), 5–21.
- National Institute for Learning Outcomes Assessment. (2012). *About us*. Retrieved from <http://www.learningoutcomeassessment.org/AboutUs.html>.
- National Recreation and Parks Association. (2013). Council on accreditation of parks, recreation, tourism, and related professions (COAPRT): Learning outcomes and standards and assessments. Retrieved from http://www.nrpa.org/uploadedFiles/nrpa.org/Professional_Development/Accreditation/COAPRT/2013%20COAPRT%20Standards_04-30-13.pdf
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385–407.
- Qualters, D. (2010). Bringing the outside in: Assessing experiential education. *New Directions for Teaching and Learning*, 124, 55–62.
- Niepoth, B. (1998). The Evolution of Separate Accreditation for Recreation and Park Curriculum. In B. Hawkins (Ed.), *Historical Perspectives on the Development of the NRPA/AALR Council on Accreditation for Recreation Park Resources and Leisure Services Education*. Ashburn, VA: National Park and Recreation Association.
- SALG. (2013). About SALG. Retrieved from <http://www.salgsite.org/about>
- Snyder, T. D., & Dillow, S. A. (2011). *Digest of Educational Statistics, 2010*. U.S. Department of Education, National Center for Educational Statistics (NCES 2011-015).
- Spellings, M. (2006). *A test of leadership: Charting the future of U.S. higher education*. U.S. Department of Education.
- Suskie, L. (2009). *Assessing student learning: A common sense guide*. John Wiley & Sons.
- Terenzini, P. T. (1989). Assessment with open eyes: Pitfalls in studying student outcomes. *The Journal of Higher Education*, 644–664.
- Trow, M. A. (2005). Reflections on the Transition from Elite to Mass to Universal Access: Forms and Phases of Higher Education in Modern Societies since WWII. UC Berkeley: Institute of Governmental Studies. Retrieved from <http://escholarship.org/uc/item/96p3s213>
- Turner, P. (1984). *Campus: An American planning tradition*. Cambridge, MA: MIT Press.
- Volkwein, J. F. (2010a). The assessment context: Accreditation, accountability, and performance. *New Directions for Institutional Research*, 2010(S1), 3–12.
- Volkwein, J. F. (2010b). Assessing student learning in the major field of study. *New Directions for Institutional Research*, 2010(S1), 101–109.
- Williams, P. A. (2008). Challenging the Status Quo: What is Driving Change in Assessment in Higher Education? *eCULTURE*, 1(1), article 5, p. 47–54.
- Winskowski, C. (2012). U.S. Accreditation and Learning Outcomes Assessment: A Review of Issues. *Bulletin of Morioka Junior College Iwate Prefectural University*, (14), 21–40.
-