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INTERVENTION/RETENTION PROGRAMS

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Identifying Learner Strengths and Weaknesses: Utilizing the LASSI as Part of a Retention Strategy
Timothy S. Pure, Ed.M., Rutgers University

Introduction:
At the Rutgers-Camden Learning Center, an integral part of the Rutgers-Camden campus, the Learning and Study Strategies Inventory is frequently utilized as part of the academic coaching program. In addition, the LASSI is also used in the Continued Probation Intervention Program, as well as in the Educational Opportunity Fund's Summer Institute. We have found the LASSI to be an excellent tool for encouraging students to discuss their learning strengths and weaknesses, as well as a vehicle for addressing areas of academic need. For the purposes of this article, we will detail our usage of the LASSI for students on continued probation as an example of the usefulness of the Learning and Study Strategies Inventory.

LASSI and the Continued Probation Intervention Program
Rutgers-Camden students whose cumulative grade point average falls below a 2.0 for two consecutive semesters are placed on continued probation by the Rutgers-Camden Scholastic Standing Committee (SSC). Students on continued probation are required by the SSC to attend meetings throughout the semester with the Learning Specialist, as part of the Continued Probation Intervention Program. The Intervention Program utilizes an intrusive advising model to facilitate students returning to good academic standing.

Students meet with the Rutgers-Camden Learning Specialist
on a bi-weekly basis and discuss topics such as time management, test taking skills, study skills, self-advocacy, strategic reading, and goal setting. One of the first questions posed to a student on continued probation is: "Tell me your learning strengths and weaknesses? What skills help you succeed? What areas of weakness are inhibiting your success?" Often, students are at a loss to describe the metacognitive skills that help them learn effectively. Many students report never having discussed learning strengths and weaknesses during their educational careers.

The LASSI is administered to students on continued probation during the first meeting with the Learning Specialist. The results are discussed, as a way to initiate the conversation about the student's academic strengths and weaknesses, and how these may be playing a role in the student's performance in college. Of the ten LASSI scales, students on continued probation frequently score lowest in attitude, motivation, self testing, and time management.

These four scales play a critical role in the outcomes of students. A student who scores low in self testing, for example, frequently prepares poorly for exams and misidentifies the most important items to study. We utilize these scores to begin an initial conversation about study skills, test-taking strategies, goals, and the importance of maintaining a balanced schedule. In addition, this information can also be used to make appropriate referrals to other campus
resources. A student who scores low on the attitude scale is often encouraged to meet with a representative from Career Services and seek a major or field in which the student would find greater motivation.

**Conclusion**

At the Rutgers-Camden Learning Center, we have utilized the LASSI to help students begin to identify the metacognitive processes that lay behind effective learning. A student who can identify learning strengths and weaknesses is in a better position to be a more active learner, in charge of his or her own education. As such, "human freedom and agency are grounded in the ability to consider possibilities and chart more self-determined courses of action" (Lapan, p. 13). Our future plan for the LASSI includes using it as a post-test so as to better evaluate the changes a student undergoes during academic coaching, a plan we will trial this summer during the Educational Opportunity Fund’s 2009 Summer Institute.

**Sources:**

Beginning in 2007, the LASSI inventory was selected by the college as a tool to broaden students' perceptions about academic success. The LASSI is administered during mandatory communication or math courses for students whose placement tests indicate a need for developmental course work. The LASSI inventory was implemented because instructors of new students felt that self-regulation skills are integral to student success, yet many students do not realize how these skills impact their learning. We have students take the LASSI inventory during the first weeks of school so there is adequate time to offer assistance in needed areas.

The LASSI is introduced to the students as a way to provide personal insight into areas that can potentially impact learning. The students are aware that the information will be reviewed and addressed by the instructor. The collected data from each class provides information about students' perceived areas of weakness. This knowledge is then used by the instructor to encourage metacognition, through class discussions, activities, or individual conferences, about learning and self-regulation. Most students are eager to engage in these conversations. Toward the end of the semester students retake the LASSI. The results of the early and late semester surveys are compared; invariably the scores increase from the beginning of the semester to the end.
The primary goal for using the LASSI is to draw attention to specific topics related to learning and self regulation, and to encourage metacognition. Likewise, it is our hope that discussion about the LASSI can assist students to develop a repertoire of strategies they can use as they progress through their academic careers. When students take personal responsibility for learning (locus of control), realize the need for improvement (metacognition), try new strategies, and experience success, they feel like they have more control over their learning, thus increasing their self-efficacy. We feel this is truly beneficial for new students.
The Stern Tutoring and Alternative Techniques in Education (STATE) is a program available to students with learning disabilities and related problems at Michigan State University (MSU). The program is endowed through the generous gift of Mickey and Debbie Stern, whose personal experiences with a college student with learning disabilities led to their decision to provide funding for a program of comprehensive services available to those with learning disabilities at MSU. The program, provided at no cost to students, has been serving the MSU community since 2005.

The LASSI has been an important component of the STATE for the past two years. Students accepted into the program have ongoing consultation with disability specialists at MSU's Resource Center for Persons with Disabilities (RCPD). They are assigned to mentors who, while experiencing difficulties similar to those of the students in the STATE program, have achieved high levels of academic success at MSU. STATE participants receive individualized tutoring in a course deemed to be particularly challenging. Training and resources are available so that students may avail themselves of a wide range of assistive technology available through the RCPD, e.g. the Kurzweil 3000 text-to-speech program. Finally, all students participate in a semester long, weekly seminar entitled "Constructing Success: Foundations and Bridges".
Early in the semester students in the seminar complete the LASSI. The results become the cornerstone of the personal action plans for academic success that students develop in conjunction with their peers and the seminar instructor. Many students are dismayed to discover that, relative to the LASSI normative sample, their percentile scores are very low for a wide range of study strategies. Students are counseled to consider these low scores as a positive finding, as they pinpoint very specific strategies that students can now begin to incorporate into their overall approach to academics. The personal action plans are developed with core symptoms of the student’s disabilities, neuropsychological evidence about cognitive strengths and weakness, and LASSI-generated results to inform students in selecting the goals and objectives that will guide their work in the upcoming semester. A major focus of the remaining seminar sessions is in teaching students the actual active engagement and learning strategies assessed with the LASSI. Peer feedback and support are heavily emphasized in helping students monitor their adherence to their own personal action plans.

Students have been very positive about the role that the LASSI has played in their efforts to reach new levels of academic success. For many students, surprising low scores serve as a "wake-up call". Students report appreciating the level of detail provided about exactly what behavior changes are likely to prove beneficial. Students complete a LASSI post-test as the end of the semester nears. Concrete evidence of changes in actual strategies employed reinforces the work they have done over the semester and helps sustain their motivation for continued efforts to excel.
Using the LASSI with Academically At-Risk Students
Valdis Zalite, M.A. and Melanie Thompson, Ed.S.
Southeast Missouri State University

The Office of Learning Assistance Programs and Disability Support Services in collaboration with Educational Access Programs, Student Support Services, Athletics, and Admissions at Southeast Missouri State University initiated an Academic Enhancement Program in the fall of 2007. The Academic Enhancement Program was designed to foster academic success for students admitted to the university through the program. Students admitted into the program met certain criteria which indicated potential for being academically "at-risk," such as low ACT composite scores and/or low high school GPA. To assist students in finding academic success through the program, several components were outlined in a written agreement that students signed prior to starting their first semester. Agreed upon components included developing an individualized College Success Plan for each student, student participation with College Success Seminars, provision of intrusive mentoring/coaching, weekly to bi-weekly meetings between the students and their assigned staff member, and study hours.

As a component of each individualized College Success Plan, students were required to complete the LASSI. Staff worked with students to complete the LASSI within the first month students were on campus. One goal of providing the LASSI early in the program was to assist students in identifying areas that may impact their ability to be academically successful. Another goal
was to assist staff in designing College Success Plans that included requirements which addressed students' areas of weakness, as identified through the LASSI. The paper and pencil version of the LASSI was made available to all students that participated in the program. The LASSI was administered in person, in an environment conducive to optimum results. Students completed the LASSI independently.

Once the LASSI had been completed, a meeting was scheduled between the student and their assigned staff member to review and discuss the results. During these meetings, staff members identified areas below the average percentiles for each of the 10 categories, and then facilitated conversation with the students about those categories. Areas identified as challenges were incorporated into specific goals to be addressed through the College Success Plan. For example, staff would identify College Success Seminars being provided that addressed topics related to the areas identified as challenges. Areas identified as strengths were discussed in relation to assisting students build upon those strengths in working toward academic success. Strategies were identified with students as to how to incorporate their strengths into day to day college life.

The initial cohort of the Academic Enhancement Program included 107 students. Those students were assigned to staff within the various offices that collaborated with the program. Each staff member involved had the discretion as to
what degree they incorporated the LASSI into the individualized College Success Plans. Specifically for the Office of Learning Assistance Programs and Disability Support Services, 28 students completed the LASSI. The following data is the averaged results per category for those 28 students:

\[
\begin{align*}
\text{ANX} & = 19 \\
\text{ATT} & = 29 \\
\text{CON} & = 23 \\
\text{INP} & = 26 \\
\text{MOT} & = 29 \\
\text{SFT} & = 24 \\
\text{SMI} & = 25 \\
\text{STA} & = 25 \\
\text{TMT} & = 23 \\
\text{TST} & = 26
\end{align*}
\]

During the meetings in which students and staff reviewed and discussed the LASSI results, students received a LASSI Strategies handout outlining various tips and suggestions for each of the 10 sections. The LASSI Strategies handout is available, upon request, by contacting lapdss@semo.edu. In subsequent meetings, the tips and suggestions were reviewed as they applied to each individual student. In addition, based on select LASSI category scores, referrals were made to resources on campus outside of the collaborative offices and programs. For example, those students who scored below the 50th percentile with Anxiety were referred to University Counseling Services for further assistance and/or assessment.
In subsequent cohorts of the Academic Enhancement Program, the LASSI has been administered as well. Each semester, new College Success Seminars are developed and presented that center around areas consistently identified through the LASSI as challenging for students in the program. The College Success Seminars are open and available for any student on campus, not just students in the program. The LASSI is administered and incorporated into College Success Plans for students who are not a part of the Academic Enhancement Program as well. College Success Plans are intrusively offered to targeted student populations including but not limited to exploratory students, students with disabilities, students starting on academic probation, and students who have since completed the requirements of the Academic Enhancement Program.
Multiple Uses of LASSI at a 4-Year Public Institution
Christina Carrubba-Whetstine and Linda Dixon
Miami University of Ohio

The Rinella Learning Center uses the Learning and Study Strategies Inventory (LASSI) in multiple ways to assist students who struggle academically. We use it as an orientation assessment tool for the special admission Scholastic Enhancement Program; our 2 credit hour learning strategies course, our intensive Academic Coaching Program, and our holistic First Year Academic Warning Intervention. Though our Learning Center has used the LASSI since the 1990's, the online version has become bedrock for our services over the last 5 years.

We first started using LASSI with The Scholastic Enhancement Program (SEP) in the early 90's as one of the assessment tools we administered during the Summer Orientation and Registration Program. At that time we used hard copies and discussed the results with students along with writing and reading test scores as part of our academic advising and registration process. We have since adapted to the electronic format and now incorporate it in our freshmen seminar course.

The Rinella Center also coordinates and teaches a total of 14 sections of our "Learning Strategies for College Success" course serving approximately 300 students a year. The intent of the course is to help students develop more sophisticated approaches to time management, note taking, test taking, critical reading, organization, and other effective study strategies with an overarching emphasis on metacognition. As part of the class, we
require each student to take the LASSI. The results aid the instructors in developing a course tailored to the unique needs of the students. Students and instructors report that the individual results of the Anxiety, Test Taking, and Self Testing scales prove most useful in advancing the student’s understanding of themselves as learners and encourage the development of metacognitive skills.

In 2006 we launched an Academic Coaching Program designed to address the needs of students struggling with organization, accountability, and time and personal management techniques. Some coaching students have documented learning disabilities, many have diagnosed ADHD, and all either self select or are referred to participate. The purpose of coaching is to enhance a student's ability to navigate the university system, develop and monitor progress towards appropriate academic goals and personal management techniques, and make conscious and informed decisions about their education. As an assessment tool students are required to complete the LASSI and the results are used by the coaches to engage in meaningful dialogue about the student's strengths, weaknesses, and goals. Coaches report that the LASSI serves as a "jumping off point" for conversation during guarded first meetings with their students. Students indicate that it confirms what they know about their learning habits.

Lastly, we use LASSI as part of an intervention process we use with first year students. Each year approximately 300 students are placed on Academic
Warning as a result of their first semester grades (GPA below 2.0). In conjunction with the Office of the Dean of Students and the First Year Advising program, the Rinella Learning Center heads up an initiative to intervene with each of these students through a series of required meetings and assessments. The intent of the intervention is to help students make informed decisions about their course schedules, time management, and learning strategies; to encourage students to utilize campus support services, such as their academic adviser, the Rinella Learning Center, and Health and Student Counseling Services; to set appropriate and realistic academic goals; and to help students return to Good Standing by the end of their second semester. Each student is required to complete the LASSI and have a series of meetings with their Academic Adviser and a Learning Center Specialist. The results of the LASSI are used to inform the staff and student about the student's learning needs. We find that with this "high risk" population of students, the Anxiety, Information Processing, Concentration, and Self Testing scores provide the most useful information about what is impeding the student's ability to perform. Frequently, students report having elevated levels of anxiety that prevent them from focusing while studying and from performing while taking an exam. Additionally, low scores in Information Processing and/or Concentration usually reflect a high level of frustration with the studying process. Finally, many of our "high risk" students score low on the Self Testing
scale, revealing poor and ineffective study habits. These scores combined with information gained from student conversations with both the adviser and the learning specialist often lead to referrals to other support services, occasionally result in recommendations for assessments for a learning disability, and almost always leads to instruction in effective study methods and behaviors.

As a result of these experiences we intend to continue using the Learning and Study Strategies Inventory (LASSI) with plans to assess its effectiveness and possibly expand its use in other areas. As our services expand to include outreach to international students and graduate students, we will be looking for ways to incorporate the LASSI into our learning curriculum.
Using the LASSI in a Post-Secondary College Transition Program for Students with Learning Disabilities and Other Cognitive Disorders

Sharon Moukperian, Niagara College & Vera E. Woloshyn, Brock University

The Ontario Government has acknowledged the importance of post-secondary transition programs in ensuring learners with optimal opportunities for learning success (College Committee on Disabilities Issues, 2001). Accordingly, the Ontario Government has allocated additional resources to postsecondary institutions to host summer transition programs for students who experience learning challenges. In 2006, a collaborative partnership between the Centre for Students with Disabilities (Niagara College) and the Reading Clinic (Brock University) was established with the intent of developing and implementing an innovative college-based summer transition program for students with identified learning disabilities (LD), other cognitive and emotional disorders, as well as general learning difficulties. For the college, providing academic programming for such a diverse group of students (e.g., learning disabilities, attention deficit/hyperactivity disorder, mild intellectual deficit, Asperger’s syndrome, spina bifida, depression and anxiety disorder) was a relatively new process but one that was deemed as critical and responsive to the needs of its students.

Briefly, the primary purpose of the summer transition program was to prepare students for success in the postsecondary environment and provide them with relevant learning strategies and skills. As part of this preparation, we believed that students needed to be aware of their general cognitive or learning profile including their areas of strengths and needs. Critical to this profile was an
Analysis of the learning strategies and skills that they already possessed and used efficiently, those that they possessed but required more focused attention applying consistently, and those that required further development or accommodation. To this end, the Reading Clinic completed an intensive reading, writing, and study skills assessment, including the LASSI, for each student prior to entering the summer transition program.

The results of the assessment were used to provide critical feedback about students' academic profiles to the faculty and staff planning and delivering the summer transition program as well as working with the students for the remainder of the academic year. The results of the academic profile facilitated college staff's abilities to develop individualized targeted instruction that capitalized on students' learning strengths and provided sensitivities to their areas of need. The use of the LASSI as part of this assessment, however, was not without question, especially during the first few years of the program. Specifically, we were uncertain about whether the participating students would possess sufficient metacognitive awareness and self-reflection abilities to respond appropriately and accurately to the LASSI. Students with learning difficulties and other exceptionalities are often challenged to learn from previous experience, formulate appropriate action plans and follow through on their execution (Hall, Smith, & Chia, 2008; Gropper & Tannock, 2009; Reaser, Prevatt, Petscher, & Proctor, 2007).
The two-week summer transition program focused on providing students with explicit instruction (Cano, 2006; Tinnesz, Ahuna, & Kiener, 2006; Woloshyn, Elliott & Kaicho, 2001) in areas overlapping with the LASSI subscales including note taking, studying, organization and time management. This instruction was provided through a series of mini-lectures and hands-on activities where students were engaged in simulations reflective of college-level instruction and the challenges and demands associated of upcoming academic year. For instance, students participated in lecture simulations, examination preparations and essay writing. Such simulations allowed students to develop realistic expectations about the demands of their academic programs and their abilities to meet these challenges within a relatively, risk-free environment.

Most importantly, these sessions also provided students with a "hook" on which to reflect on the findings of their academic profiles (learning assessments) including the LASSI.

In order to further minimize students' anxieties and uncertainties about the upcoming academic year, they were also provided with an orientation to the college campus and provided with advanced copies of their course syllabi and materials including textbooks. Students also received training in the use of relevant assistive technologies such as text readers (Kurzweil, 3000). As with the other simulations, these sessions also provided a critical experience for subsequent instruction about the integration of effective
learning and study skills with assistive technologies. 

At the end of the program, students meet with their learning strategists to debrief formally about the results of their learning assessment including the LASSI and to develop a learning plan for the upcoming academic year. Central to this plan were many of the identified learning strategies and study skills introduced during the summer transition program. We believed that the familiarity students acquired in the use of these strategies and skills throughout the summer session would be instrumental to their abilities to use them throughout the academic year. Students also completed the LASSI for a second time at the end of the first term, in part, so that they could compare their summer and current profiles. The results of the second assessment were also used to reinforce students' existing programming and/or further develop and modify academic plans and accommodations as required. Collectively, the evidence supports the conclusion that these students completed the summer transition program and their subsequent academic year successfully. Incidental feedback from students indicated that they felt well prepared to begin the academic year, expressing confidence in their ability to organize and respond to the demands of their academic programs, "I did my best and my marks surprised me because I did so well," "I still did good because I went and found help to help me with my problems," and "I knew the steps to make me successful". Students continued to demonstrate academic success
throughout the remainder year, providing evidence of using the specific learning strategies and study skills advocated in the summer transition program including advanced organizers, prior knowledge activation, skimming and scanning. The majority of students availed themselves to the resources and supports provided by the college, consulting with their learning strategists and assistive technologists on a weekly or bi-weekly basis. Midterm progress reports indicated that students in the summer transition program were performing at a 'satisfactory' level (i.e., satisfactory, unsatisfactory, not attending) or better in 90% or more of their courses. Analysis of their year-end academic transcripts revealed that 80% of the summer transition students completed their academic year successfully. Of those who experienced academic difficulty, 9% chose to enter another program versus withdraw from the college, with the college boasting an impressive 83% retention rate across all its summer transition program participants (of the 17% who left college before graduating, 1.7% cited mental health issues, 3.4% were asked to leave, and 12% claimed academic and/or financial difficulties).

Exploring students' beliefs and perceptions about their preparedness to complete their college program, willingness to access relevant college supports and overall academic behaviours provided us with relevant insights about how to support, sustain, and retain such students. The LASSI was used to help students increase self-awareness and formulate
appropriate action plans. Self-determination is the combination of skills and beliefs that allow individuals to understand their strengths and weaknesses while perceiving themselves as capable. It allows self-regulation, goal-orientation, and autonomy (Field, Sarver, & Shaw, 2003). However, students' inaccurate perceptions and expectations for their learning can inhibit such strategic processing, motivation, and engagement and lower students' overall level of self-determination (Alvarez & Risko, 2009). In retrospect, we realized that we used the LASSI as a tool to assist these beginning college students to examine their self-determination as it related to learning strategies and study skills. Using the LASSI also enabled the learning strategists and assistive technologists to provide students with additional instructional supports that complemented their identified areas of strength while being sensitive learning needs.

Today the summer transitional program continues to grow and thrive. Within the context of this program, the LASSI has provided valuable insights to educational professionals charged with supporting the academic success of students who learn differently. We strongly encourage other educators to use this valuable tool.

References on following page.
References


Northeast Alabama Community College (a two-year institution) implemented the Learning and Study Strategies Inventory (LASSI) in 2007 as one of several developmental education student support diagnostic tools. The purpose of implementing this tool was not only to provide assistance to students but also to fulfill a requirement of NACC's Quality Enhancement Plan, which focused on developmental education.

Consequently, it was decided that the target group for the LASSI would be those students who enrolled into the lowest level Developmental Education (DE) courses, which consisted of the following courses: English 092, Math 090, Reading 083 and a Basic Study Skills 115 (a learning community component). After the administration of the LASSI, the coordinator of the DE program and the instructors are provided the students' LASSI reports. Later, the students are given the opportunity to participate in workshops to assist with various affective issues profiled on their ten-scale LASSI report.

Over a period of several years, the data has shown that those students who took the LASSI and participated in workshops, experienced higher retention and success than those who did not. By the end of each semester, retention in developmental math courses has shown to range in the 80th percentile or above with successful completion ranging at the 70th percentile and above.

*Note: Data provided upon request.*
LASSSI as a multi-use tool in Kedge -
A program for supporting students at risk for dismissal
M. Ellen Mitchell, Ph.D., Illinois Institute of Technology

For many students, the habits necessary to perform well in college are substantially different from what is needed to succeed in high school. The transition to college, particularly in colleges and universities with academically rigorous programs, calls upon skills that must be learned and not second nature. Many talented students are able to complete high school without learning the requisite skills associated with independent learning and studying but which are critical to success in college. In part this is due to the fact that much of the curriculum in many high schools is centered on completing homework, as opposed to studying, and on classroom learning with relatively less emphasis on self-instruction and self-directed learning. Despite strong intelligence and ability level, each year a substantial proportion of students fail and drop out of college unnecessarily. Such students are particularly vulnerable because for many, it is the first real failure experience that they have ever faced, and thus it can be paralyzing. We developed a program for such students that we named Kedge; a program that incorporates LASSSI assessment as a central component supporting several of our specific aims.

A kedge is a small anchor that is used to help free sailboats that have run aground; it is a great crossword puzzle word and metaphor for the situation in which students can find themselves. Begun as a pilot program in fall of 2007, Kedge has delivered results: 86% of our Kedge students have been able to continue in
the university, and all of the students who completed the program improved their GPAs. In order to appreciate the value of the LASSI assessment in this program, it is important to understand the program, which has evolved into three distinct levels. The first and most intensive level of the program was designed for students on academic probation for a second consecutive semester and therefore at risk for dismissal. This level of the program includes three hours a week in a for-credit course that is very strict with respect to attendance and commitment. Entry into this program is contingent on an application and interview process in which student readiness and the probable causes for academic failure are assessed, along with the student motivation. As well, communications with parents at the time of application are typical with this group because without parental knowledge, support, and involvement, it is harder for students because they commonly conceal the extent to which they are struggling. The avoidance and secretiveness associated with academic failure are obstacles that have to be overcome. The second tier of the program is for students who face their first semester of probation, often but not always first year students struggling to transition to college. This level of the program generally includes students for whom self-regulation, and healthy choices are particular challenges. The third tier of the program is composed of first year students who are identified as potentially at risk as a result of either relatively lower entrance test scores, or other factors such as coming from high schools recognized as resource limited or academically uneven.

The LASSI assessment is used for all levels of the program and serves multiple uses. First, it allows for a broad and general assessment of areas relevant to academic success and can inform the needed focus of the program. For example, if the scores of a cohort of students in a section of the program
coalesce around the skill indices or conversely, the so called will indices, then the focus of the program can be tailored to emphasize those components more deeply. Second, we use the LASSI in overt discussion with students requiring them to examine relative strengths and weaknesses and set their own goals in discussion with peers about the challenges they face. The public endorsement of goals is powerful for students and supports accountability for progress toward goals. The discussion of strengths and weaknesses facilitates sharing of strategies others have developed to succeed. Thus, peer problem solving and peer mentoring is fostered as well as the sharing of ideas proven by similarly situated others. This can be uplifting and empowering for students to be able to talk about areas of success as well as challenges. Third, we use LASSI scores to support linkage with other support elements of the university such as counseling, tutoring, and student writing clinic by encouraging the students to think about the overall meaning of their scores with respect to their needs.

Finally, we use a post test of the LASSI to determine if the program has had an impact on the domains, particularly the domains identified initially as weak. In this fashion, it serves as part of our outcomes assessment process.

Overall, there are many reasons that students struggle to succeed in college. These range from a lack of study skills, to poor self regulation, to psychological disorders like depression and anxiety, financial concerns that drive students to work more hours than is prudent, romantic squabbles, individual maturity, familial changes such as divorce, death, or illness, and more. Retaining students is more than just a financial concern for universities. Above all, efforts must be aimed at supporting the success of our youth to go forward as productive adults. We have found the LASSI to be a useful tool with many uses, particularly in the context of linkage with comprehensive integrated academic and student support services.
A growing number of adult students arrive at higher education doorsteps underprepared and unprepared to face the academic challenge. This is the case at Roane State Community College; this is not unique to this institution. Clearly, a potential solution to academic success may lie in providing needed services to adult students in transition by reducing barriers, providing a pathway, arming them with learning strategies and study skills to succeed and having an advocate to assist them through the process. The literature is replete with evidence that attrition follows poor academic performance. Programs designed for non-traditional or adult students like Help to Opportunities (H2O) may offer a lifeline to better prepare students for the challenges faced throughout their academic careers. Obviously, there are some students who leave college for non-academic reasons and some are simply beyond the institution's control. Community college and technology center students often enter the academic arena managing multiple, competing demands, which put them at-risk from the first day of admission. Arming adult, dislocated and at-risk students with the learning and study strategies needed to achieve academic success may potentially increase the likelihood that students can overcome barriers, allowing them to achieve their academic goals. Roane State Community College implemented the grant-funded H2O program for adults and dislocated workers, which utilized the LASSI assessment in a tailored implementation strategy.

The H2O program, funded by Fund for the Improvement of Post-secondary Education (FIPSE), was a partnership of Roane State Community College (RSCC, located in Harriman, Tennessee), the area Tennessee Technology Centers (TTCs) and Tennessee Local Workforce Investment Area 4 in collaboration
with Worldwide Interactive Network (WIN). The H2O project overall goal was to provide adults and dislocated workers considering further training/education better outreach and recruiting; career exploration; basic and post-secondary skills preparation; support services; and result in process improvements including enhanced and streamlined services among the partners.

RSCC, a comprehensive, public, two-year institution serves the higher education needs of an eight-county service area in East Tennessee, which consists of Roane (main campus), Anderson (largest branch campus), Campbell, Cumberland, Fentress, Knox (Health Science Center), Loudon, Morgan, and Scott. RSCC provides transfer and career preparation study options, as well as continuing education and developmental education. Designed for students who plan to transfer to senior institutions, the academic transfer curricula include two years of instruction in the humanities, mathematics, natural sciences, and social sciences. RSCC's career preparation programs include business management, health science, police science, and other fields resulting in an associate’s degree or certificate. In this role, RSCC offers nursing and thirteen (13) health science programs. RSCC's wide variety of career programs, remote/rural locations, array of education delivery systems are attractive to the non-traditional older student. RSCC was founded in 1971 and is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools.

TTCs are administered through the Tennessee Board of Regents, as is RSCC. Tennessee has twenty-seven TTCs, with four located within the RSCC service area. TTCs provide technical training for workers to obtain the skills necessary for advancement in today's competitive job market. Training programs include
Automotive, Building Construction, Business Systems, Diesel Powered Equipment, Digital Graphics, Electronics, Electricity, HVAC, Machine Tool, Industrial Maintenance, Practical Nursing, Surgical Tech, Welding and more. TTC locations within the RSCC service area and this partnership are Crossville/Cumberland County, Harriman/Roane County, Jacksboro/Campbell County and Oneida/Scott County.

LWIA 4 services are administered through the East Tennessee Human Resource Agency. Services are delivered in nine area Career Centers that house a variety of employment and training partners. Tennessee has a network of centers across the state where employers can go to find the workers they need and job seekers can get assistance. Centers offer computerized labor market information, career assessment and exploration, internet access, workshops, an online talent bank, job placement, recruitment, incumbent worker training, on-the-job training assistance, and assistance with supportive services and job training.

The program developed and made available enhanced basic skills and post-secondary preparation assessment and educational tools for the target population. Beginning fall 2010 and extending through spring 2013, the Learning and Study Skills Inventory (LASSI) was administered to all program participants free of charge. All H2O participants assessed using LASSI were offered learning and study strategy workshops and/or resources to develop a personal improvement plan.

During the three-year project period, 1,051 adult "non-traditional" students were assessed using the LASSI assessment. H2O learning and study strategy resources were readily available for use by project participants. The program director during workshops provided information and resources relative to the key learning and study strategies for
areas of weakness that were identified at the aggregate-level (sample size = 298/year 1) during the first year of implementation. At the end of the project period, the aggregate-level results (sample size = 1,051/year 3) were consistent with the previously identified areas of strength and weakness assessed during year one of the project implementation.

The program director during workshops provided an overview of results after the inventory had been completed by the students. Following the inventory a brief educational session was conducted on common areas of learning and study strategy weaknesses (previously identified via the first year's results). During traditional workshops, the director primarily concentrated on the following areas: test anxiety, concentration, time management and test-taking strategies. Learners were also directed to access web-based resources, developed for H2O participants, on learning and study strategies. Educational resources were readily available for all ten areas that are assessed using the LASSI. In addition, resources were available in four additional content areas: active learning, critical thinking, engagement, and personal responsibility.

The original project plan called for learning and study strategies to be delivered in a traditional in-class format; however, for ease of accessibility and sustainability these were developed in multiple formats with availability online and for use in a classroom. Each student is uniquely different, requiring an individualized combination/set of study skills to maximize their learning potential. Every student has a preferred learning style whether visual, auditory, kinesthetic, or textual. Therefore, a combination of learning and study strategies will work differently for each student.

The LASSI assessment measures ten scales linked to learning strategies and study skill, but four additional areas
affecting student learning were identified by the college's staff as critical areas of difficulty. The fourteen content areas offering resources to students are as follows: 1) Active Learning, 2) Attitude, 3) Concentration, 4) Critical Thinking, 5) Engagement, 6) Information Processing, 7) Main Ideas, 8) Motivation, 9) Personal Responsibility, 10) Self-testing, 11) Study Aids, 12) Test Anxiety, 13) Test-taking, and, 14) Time Management. This allowed participants assessed by LASSI to align their personal development plans, based on individual results, to specific learning strategy/study skill resources available through H2O to improve areas of weakness identified.

The instrument was administered by the program director to all H2O participants either through the self-scoring hard copy or the web version of the LASSI. All scores were maintained by the program director in a database and/or through the LASSI database.

All LASSI percentile scores were analyzed at the aggregate-level for each of the ten scales to inform support service planning. The project director's external evaluator analyzed aggregate-level LASSI scores for the population being served and the program director examined the data by partner institution to determine any specific resources that are needed.

H2O participants were pre-tested using the LASSI tool. The self-report instrument provided students both diagnostic and prescriptive information. Students could readily see how their self-ratings compared with thousands of other college students. Students could appreciate that the assessment focuses on thoughts and behaviors as these relate to successful learning. Further, discipline-specific educational program directors could appreciate aggregate-level results to determine areas of strength and/or weakness as a new cohort of students would
begin a program (e.g., nursing class). Assessments were typically administered at the beginning of a semester with new cohorts of students. Whereby, the results provided program directors with information on areas of strength and weakness for a given cohort of students. This afforded the H2O program director along with the educational program directors the opportunity to develop and/or use instructional materials focused on specific needs identified for a given cohort of students.

Overall, the student results were analyzed for trends in the percentile rankings for each of the ten scales. The ten LASSI scales are as follows: Anxiety (ANX), attitude (ATT), concentration (CON), information (INP), motivation (MOT), self-testing (SFT), selecting main ideas (SMI), study aids (STA), time management (TMT), and test strategies (TST). If students scored above the 75th percentile on any of the ten LASSI scales, these were areas of strength. Students who scored greater than the 75th percentile on any of the scales would not need to target those areas for improvement. If students scored between the 74th percentile and the 50th percentile on any of the ten scales, these would be recommended areas of improvement for those respective learning and/or study strategies. If students scored below the 49th percentile on any of the ten scales, these were highly problematic areas that should be targeted for improvement to avoid serious problems with academic studies.

Of the 1,051 program participants assessed using LASSI, the scores were indicative of areas of developmental needs relative to the learning and study strategies. The table below provides a brief description of each scale and the aggregate LASSI totals for the H2O participants that were tested during the project period. H2O participants’ percentile ranking
results indicated (see Table 1), the greatest areas of student strength were as follows: 1) (INP) Utilization of learning and organization strategies for academic materials, 2) (SFT) Ability to test their own level of knowledge and understanding, and 3) (MOT) General motivation to complete specific tasks to achieve academic success. Areas of greatest academic weakness were: 1) (ANX) anxiety relative to academic tasks, 2) (TST) Test preparation or taking strategies, 3) (SMI) Ability to identify the main idea or important materials and the use of study aids or resources to learn of retain material, 4) (ATT) General motivation for succeeding, and 5) (STA) Utilization of resources for learning and retention. Based on the largest percentage of students scoring in the lowest percentile ranking category, the results were indicative that the following areas necessitate improvement for academic success for this sample of adult learners:

- Anxiety,
- Test-taking strategies,
- Identification of main ideas,
- Preparation and utilization of study aids, and
- Concentration on academic tasks.

All of the aforementioned areas were areas of weakness for this target population and could significantly hinder student academic success.

Resources will continue to be available through the college's website, which will be sustainable beyond the life of the grant. In addition, a grant from the U.S. Department of Labor, Trade Adjustment Assistance Community College and Career Training Grant Program (TAACCCT) for 12.5 million dollars was awarded to Roane State Community College has been procured, ensuring that dislocated and underemployed workers have the opportunities to obtain training in healthcare fields as
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returning adult students. Therefore, students will still have access to the LASSI and other student resources that were made available through the H2O program.

H2O participants reviewed LASSI results, interpreted their results and were able to ascertain areas in need of improvement. Students were encouraged to develop a formal improvement plan.

LASSI has been a useful assessment tool in the H2O program. It aided in providing a supportive learning environment for adult students, which fostered a successful academic experience for those students being served. The learning and study strategies that students employ can substantially affect the quality of learning achieved by students. Adult higher education participation is not likely to abate in the near future. Why not equip these students with learning and study strategies to foster academic success?

### TABLE 1: H2O Students – LASSI Results

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description of Scale</th>
<th>H2O Participants</th>
<th>Percentile Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=1,051</td>
<td></td>
<td>Average</td>
<td>Percentage by Percentile Groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentile Rankings</td>
<td>0-49</td>
</tr>
<tr>
<td>ANX</td>
<td>Measures how tense or concerned a student is when approaching an academic task.</td>
<td>43.85</td>
<td>53.9%</td>
</tr>
<tr>
<td>ATT</td>
<td>Measures general motivation for succeeding in school.</td>
<td>51.90</td>
<td>39.4%</td>
</tr>
<tr>
<td>CON</td>
<td>Measures students’ ability to focus on studying and listening and to avoid distraction.</td>
<td>53.35</td>
<td>43.1%</td>
</tr>
<tr>
<td>INP</td>
<td>Measures students’ ability to learn by use of elaboration, creativity, and organization strategies. (strategies: mnemonic devices and note-taking strategies)</td>
<td>65.85</td>
<td>21.3%</td>
</tr>
<tr>
<td>MOT</td>
<td>Measures students’ general motivation to specific tasks relate to achieving success and the degree to which he accepts responsibility for daily tasks.</td>
<td>59.52</td>
<td>33.1%</td>
</tr>
<tr>
<td>SFT</td>
<td>Measures students’ ability to test her own level of understanding/knowledge.</td>
<td>64.70</td>
<td>29.2%</td>
</tr>
<tr>
<td>SMI</td>
<td>Measures how well a student can identify important material.</td>
<td>51.75</td>
<td>45.0%</td>
</tr>
<tr>
<td>STA</td>
<td>Measures students’ use of resources to help him learn or retain information.</td>
<td>52.64</td>
<td>44.4%</td>
</tr>
<tr>
<td>TMT</td>
<td>Measures students’ ability to apply time management principles to academic tasks/situations.</td>
<td>55.09</td>
<td>41.1%</td>
</tr>
<tr>
<td>TST</td>
<td>Assesses students’ use of test preparation and test taking strategies.</td>
<td>51.64</td>
<td>45.8%</td>
</tr>
</tbody>
</table>
Introduction

SupportNet at Fresno State (California State University, Fresno) uses the LASSI to assist second semester first time freshmen (FTF) students, who are at-risk of dismissal from the University, take inventory of their study skills. Although SupportNet uses the LASSI with various students this article will focus on how SupportNet implements a pre and post LASSI to measure the students' progress.

“The mission of SupportNet is to work cohesively with faculty, students and student services to increase student success and retention.” – Tosha Giuffrida, Learning Center Assistant Director, Fresno State.

SupportNet is the early-warning program at Fresno State. Advisors work with students in a one-on-one environment where study strategies are discussed that will increase their awareness of their own abilities and how they can improve their weaknesses (Dennis Nef, Dean of Undergraduate Studies, Fresno State, Personal Communication, January 15, 2013). SupportNet does this by assisting students develop time-management, note-taking, test-taking skills, and connecting them to resources on campus to improve their academic success. Students from all grade levels get referred to SupportNet by faculty, staff, and some students refer themselves. When a student is referred, a SupportNet advisor will contact them and attempt to schedule an appointment with the student. However, since meeting with a SupportNet advisor is optional for students unless, they are a first time freshmen disqualified-readmitted (FTFDQ) student, it is their decision to make an appointment.
First Time Freshmen Disqualified-readmitted (FTFDQ)

Freshmen, who have received a 0.49 GPA or below in their first semester are considered Disqualified-Readmitted (DQ) students. They are required to meet with a SupportNet Advisor regularly throughout the spring semester. It is mandated that they attend an appointment before the fourth week of the semester. These students are also required to enroll in University 20T-Academic Success course which is designed to promote academic improvement (Dennis Nef, Dean of Undergraduate Studies, Fresno State, Personal Communication, January 15, 2013). If the DQ students do not meet the contract terms, which also includes not receiving an F or WU (Withdrawal Unauthorized) for the semester and obtaining a 2.0 GPA, they will not be allowed to enroll in courses the following semester.

Disqualified-Readmitted (DQ) Students Contract Terms

1. Enroll in University 20T/Academic Success
   
   a. Course description: A seminar course in academic learning strategies designed to address the educational needs of students that are experiencing difficulty in academic and personal adjustment to university requirements, not acquainted with learning strategies, or not connected to the campus. Participants will develop and master essential skills necessary for success at Fresno State such as managing time, effective note-taking, academic writing, and strategic studying. There are no prerequisites for this course.

2. Meet regularly with an advisor in SupportNet
   
   a. Meet with a SupportNet advisor every 2-3 weeks with the initial appointment within the first 4 weeks of instruction.
***If the above two conditions are not met students' registration will be delayed until the semester is complete***

1. In addition, the following requirements must be met to be eligible to return to California State University, Fresno, the next semester.

   a. Enroll in no more than 13 units during the current semester.
   b. Obtain a minimum 2.0 term GPA for the current semester.
   c. Do not receive any F or WU grades for the current semester.
   d. Enroll in and successfully complete the academic success course (University 20T)
   e. Meet regularly with a SupportNet Advisor (Dennis Nef, Dean of Undergraduate Studies, Fresno State, Personal Communication, January 15, 2013).

Pre-LASSI

During the first appointment with the FTFDQ student the SupportNet Advisor will have them take the LASSI and explain that the assessment will give both the student and advisor an idea of the student’s study skills strengths and weaknesses. It is explained to the student that the LASSI is 80 questions and is not a test of any kind but a tool that takes inventory of various academic skills.

Once the LASSI is complete the results are printed out and the advisor discusses the results with the student. At SupportNet, advisors let the student know that in categories that the student scored below the 50 percentile is where they will focus on improving. From there on out the LASSI is used as a guide to determine where the time of the sessions might best be spent. For
example, if a student scores low on time-management, the advisor will go over strategies that provide support for time-management to include study hours expected to be spent outside of class. The schedule the student makes with the SupportNet Advisor is intended to be used as a template that the student can refer to on their own and fill in with more detail on what they will try to accomplish during the scheduled study time.

The student is also directed to the SupportNet Success Toolkit on the SupportNet website in which there are handouts that coincide with the LASSI. Students can access these handouts and review them based on their results from the LASSI.

SupportNet takes an intrusive advising approach and over the course of the semester the advisor will stay in close contact with the student. For the students who are meeting with their advisor regularly, the advisor will follow-up on how they are doing in their classes and discuss any areas of concern. If students have no particular area they would like to discuss, this is the time when an advisor can identify the next area that needs improvement and discuss strategies that can increase a student's academic success.

**Post-LASSI**

After 6 – 8 weeks, the SupportNet Advisor will have the FTFDQ student take the LASSI again. Advisors review the pre- and post-results with the student. Time is spent reflecting back to the semester in which they became a FTFDQ student and compared to the current semester when they have made behavior adjustments to improve their academic success. The goal of this practice is to have the student identify concrete examples of behavior modifications over the course of the semester to improve skills and abilities. The students can use this information to set academic goals as they try to become in good standing (2.0 or above) with the university.
DATA

• The data presented are from FTFDQ students who took both a pre and post LASSI during spring 2012 and spring 2013. The FTFDQ students who completed the pre-LASSSI but not the post-LASSSI were excluded from the data. The mean percentile was used to compare the change over time.

![Graph showing pre and post LASSI percentiles](image-url)
The data shows an increase in every category. The areas that had the greatest gain were selecting main ideas, time-management, and test-taking. The sample size was 65 (n=65) students.

By implementing programs to improve academic performance, SupportNet endorses the Strategic Plan for Excellence IV: 2011-2015 (Theme 2: Commitment to Student Transformation and Success)

Conclusion

The LASSI provides advisors at SupportNet with a tool to assist struggling freshmen students in determining areas needed for enhancement for academic success. Interventions provided by SupportNet Advisors over a semester are successful in providing students tools for growth and improvement. The strongest areas of improvement include: selecting main ideas, time management, test-taking and information processing. We have used this information to take a proactive approach and have been reaching out to FTF and offering our services before students find themselves on academic disqualification. The LASSI is an integral part of how SupportNet assists students in developing academic skills and reinforces the importance of educational process.
This article describes a procedure used by the Academic Success Program (ASP) at Shippensburg University to help developmental college students who are on academic probation to improve their self-regulation skills. The Learning and Study Strategies Inventory (LASSI) was used as both a pre- and post-assessment and the structure for the intervention. The ASP is a program designed to admit and support developmental students to the University. Most ASP students enter through a summer bridge program and are assigned to work with an Academic Counselor who provides advising, transition support, and academic strategy development. If an ASP student earns below a 2.0 cumulative grade point average, the ASP provides a structured intervention delivered by the Academic Counselor.

Many theorists and practitioners have noted the importance of self-regulation skills for academic success (Lan, 1998; Young & Ley, 2003; Zimmerman, 2001). Self-regulated learners plan, organize, monitor, and evaluate their learning processes (Hagen & Weinstein, 1995). A self-regulated learner changes strategies to meet the demands of learning tasks. The problem for developmental learners, particularly those on academic probation, is that they have not developed deep toolbox of strategies. This is where the ASP Academic Counselors intervene. Because the Academic Counselors have established a prior working relationship the students are more likely to trust the ideas and actions recommended.

Ley and Young (1998) found that developmental students are particularly in need of help to prepare and structure their learning environment; organize and transform instructional materials; keep records and monitor progress; and evaluate performance against a standard. The ASP structured their intervention around these
deficits. *Figure 1* below describes how this works.

![Diagram]

**Figure 1.** Self-regulation cycle and academic counselor interventions.

**Preparing and structuring the learning environment.** During the first meeting with students, Academic Counselors asked students to identify a productive learning environment and how they intended to cope with distractions. Students wrote about their intended study environment, potential distractions, and methods for coping with distractions. At subsequent meetings, students recorded their perceptions of the extent to which they studied in their identified learning environment and the extent to which they were effective in coping with distractions.

**Organizing and transforming instructional materials.** Academic Counselors reviewed with students methods of organizing and
transforming instructional materials. For example, students brought class notes and texts for targeted courses to meetings. Students were asked to demonstrate that they knew how to create a study guide, note cards, or study questions from these materials. Academic Counselors also instructed students in semester time management. This is particularly where information from the LASSI was critical; counselors designed their interventions based upon the students’ LASSI results.

**Keeping records and monitoring progress.** At the first meeting of the semester, students recorded when tests, quizzes, papers, or other assignments were due according to their syllabi. In subsequent meetings, students recorded grades received, their current class average, and attendance for each class.

**Evaluating performance against a standard.** During the first or second meeting with their academic counselor, students calculated the grade point average needed to earn at least a 2.0 CGPA by the end of the semester. Next, the students estimated what grade they believed they would earn in each course they took during the treatment semester. During the semester, students recorded grades they received and the methods used to prepare. They were asked whether or not they were satisfied with the grade received and what they intended to do to prepare for the next major test, paper, or project. Students also completed a mid-semester analysis in order to reflect upon their performance through that point in the semester and what they intend to do for the rest of the term.

For this intervention, the LASSI was used both as a pre- and post-test assessment of self-regulation and to guide the counselors specific strategy instruction. The LASSI offers a means of calculating a self-regulation score by combining the scores from the concentration, self-testing, study aids, and time management
scores. During the 2008-09 academic year, 27 ASP students on academic probation participated in the intervention described above. Students were asked to think about their behavior during previous semester when completing the pre-test LASSI and to think about their behavior during the treatment semester when completing the post-test LASSI.

A paired samples t-test of self-regulation as measured by the LASSI showed that the students earned a pre-test self-regulation mean of 99.555 with a standard deviation of 20.220. The treatment group’s post-test self-regulation mean was 108.407 with a standard deviation of 19.335. This analysis produced a t-value of -2.865 ($p < .05$). The gain between the pre- and post-test self-regulation as measured by the LASSI was significant.

Since self-regulation has been consistently related to academic performance levels (Ley & Young, 1998) and teaching self-regulation strategies to lower-achieving learners improves their learning outcomes (Young & Ley, 2003) it makes sense to consider interventions such as the one described here. The counselors, who can be considered a trusted guide, helped students to develop the important skill of reflection. We want our struggling students to understand that by consistently applying study strategies, recording progress, and reflection, improvement is possible.

REFERENCES


Using LASSI at NACC
Shirley Buttram, Northeast Alabama Community College

NACC began using the LASSI (Learning and Study Strategies Inventory) in Fall 2008. It was administered to the lowest level developmental education students, i.e., RDG 083, ENG 092 & MTH 090 to analyze whether these students suffered from test anxiety along with other study skill issues; however, at that time, our target was test anxiety. The students who scored below 50 on the Test Anxiety scale participated in a workshop that provided physical tips & study tips on how to handle the anxiety. After participation in the workshops, these students were surveyed with 97% of them reporting that the workshop was beneficial to them.

On the other hand, after a couple of years perusing the other LASSI scales and counseling with students about their LASSI results, it was evident that other issues on the LASSI scales prevented them from achieving the success needed to be retained and successful. Therefore, the Developmental Studies staff implemented another support system for issues identified in the other scales.

Thus, the Center for College Success at NACC began a series of Study Skill Seminars a couple of years ago to address the issues identified. These seminars targeted the following study skill support systems: Effective Note-Taking Skills, Successful Time Management Systems, The Five Steps to Study Skill Success, Wise Test Taking Skills for College Success along with Important Student Information for College Success and Reading using the SQ3R Method. After each presentation, students completed a survey to evaluate the effectiveness of the presentations. Each one was given a 100% student satisfaction result in all areas: i.e., effectiveness, validity, and whether it was beneficial.

Since LASSI results have shown that math anxiety is common among the developmental mathematic student population, a DVD
workshop addressing math anxiety, is also available for viewing in the Learning Resources Center for any student who desires to do that. According to surveys administered each semester by the Developmental Studies department, ninety per cent of participants indicate that this library resource has decreased their math anxiety. The NACC staff recognized that the developmental population needed support systems and basic study skill venues to help them to be successful in their Plan of Study. The surveys rendered to each participant indicate the value of study skill workshops to the developmental population and, also, to any other student who feels it necessary to seek assistance in other study skill areas. Therefore, the LASSI instrument provided the toolkit to identify student weaknesses and provide the much needed workshops to NACC student body.
Maximizing SSS Students' Success through the use of the LASSI Assessment

Ronda R. Westry, Ph.D. and Debora Pettway, Ph.D., Troy University

Student Support Services (SSS) is a federally funded undergraduate TRiO Program sponsored through the U.S. Department of Education (USDE). The overall goal of all TRiO programs is to increase the participation, retention, and graduation rates of eligible students in postsecondary education leading to Associates, Baccalaureate, and Post-Bachelor's degrees. The objectives of TRiO are accomplished by identifying and serving students who a) are first-generation (neither parent has a four-year degree); b) have an income that falls within USDE income guidelines; and c) have a documented disability. Each year, every funded project must demonstrate that students serve through the SSS program are meeting retention, academic good standing, and graduation objectives. Troy University has been a successful recipient of the SSS grant for over 25 years.

Troy University (TU) SSS program serves over 500 eligible undergraduate students annually on three distinct campuses (Troy, Dothan, and Montgomery) by providing comprehensive academic support services. Services administered by TU SSS comprise academic assessments, tutoring in the critical core areas of Math, college level reading and writing, student development workshops, financial aid consultation, career guidance, and personal counseling. Additionally, SSS participants who qualify can apply for Grant Aid which supplements their Pell Grant. Upon students' submission of the SSS application, the selection process for students to participate in the SSS program is completed in three steps. The first step involves an Intake (interview) process where eligibility is determined by assessing the student's academic needs. Step two requires that students complete a battery of assessments which includes proficiency tests in math, reading, and writing, a
career inventory, and the LASSI assessment. In step three, newly accepted SSS students attend a new participant orientation and meet with the SSS Academic Advisor to receive an SSS Orientation packet that contains the student's assessment results along with other helpful information about the program.

The results of the assessments are presented on a form known as the Student Assessment Report or SAR. The SAR not only has the students' results from each test battery, depending on the students' scores, it also has recommendations for students to complete SSS designed online modules via the BlackBoard learning platform and/or attend SSS designed workshops that address academic deficiencies and/or the ten LASSI domains.

Recommendations for support and intervention are based on a combination of factors. The first factor is the students' classification and/or academic standing. The second factor is whether or not the student scored below the 85th percentile coupled with their academic standing and results from the academic assessment. The last factor is based on the student's reported need for help with learning strategies.

On the Troy University Montgomery and Dothan Campuses, which serves predominantly non-traditional age students (the average age is 28), over 90% of the students who were administered the LASSI assessments were recommended to complete modules and/or attend at least one LASSI workshop. As a corollary of serving students who are older and have been out of the educational pipeline for five or more years, most students, especially the students classified as freshmen and sophomores are in need of meta-cognitive support as indicated by their LASSI report and SSS application when asked about their specific academic needs. The use of LASSI helps the SSS Staff to specifically identify areas that can impede students' ability to maximize their learning in an environment that can be intimidating to the older adult learner. Consequently, the SSS workshops that are based on the LASSI domains and online modules provide students with an opportunity to improve in areas that are crucial for classroom success. As a result of using the LASSI assessment to understand adult students' meta-cognitive needs and thus following through with workshops and online modules, at the end of academic year, over 95% of SSS participants reported on the SSS Program Evaluation, that the online modules and workshops were instrumental in improving their overall GPA for the year.

For more information you may contact Ronda Westry at rwestry@troy.edu.
The College of Education Student Services office at Northern Illinois University coordinates programming within the college in the areas of retention, recruitment, and community development. To meet the demands of increasing attrition numbers, retention success initiatives were developed to assist students who were “at risk” of not meeting academic program requirements or who are identified as a demographic that might experience challenges in their academic lifetimes. These programs are primarily composed of the Academic Recovery Program for students on academic probation, the Sophomore Success Program for students transitioning into their second year and find themselves in the “murky middle,” and the Student Success Coaching program for College of Education students admitted to the University through alternative admission criteria. Each initiative includes individual assessment and personalized academic coaching that is student centered, developmental, and intrusively based in theory. The Learning and Study Strategies Inventory (LASSI) was implemented in 2011 as the key assessment tool in all three programs.

One challenge that often presents itself in academic coaching is the disconnect students experience between their ability to recognize and express that challenges exist, and their inability to identify what those challenges are. The LASSI not only provides a consistent system of measurement for these challenges so as not to have to rely on anecdotal evidence, but also provides a visual representation of the students’ strengths and challenges. This format allows the academic coach to guide the student in exploring the challenges represented, and then work together to develop a plan for overcoming roadblocks to success and set goals for
improvement measured through increased grade point average and increased LASSI scores. Moreover, it allows the students to acknowledge and celebrate their strengths.

Using the LASSI in the College of Education Student Services

As mentioned above, students utilizing any one of the College of Education retention programs are required to take the Learning and Study Strategies Inventory (LASSI) at the first academic coaching appointment. The quantitative information provided by the LASSI, is used as a guide, during the first meeting to discuss the students’ academic experiences within the context of their competencies, strengths, and challenges. Therefore, a student is able to extensively reflect on and explore those issues which may be affecting their academic success. The goal of the first meeting is to identify and examine primary causes of students’ academic challenges. For example, when working with a student who scores below the 50th percentile in the area of motivation the academic coach uses the visually represented quantitative score to guide the conversation deeper to determine what is causing the student’s lack of motivation. It is not assumed that the student is “just not interested” in higher education, but rather the time is taken to determine what the student is experiencing outside of the classroom that is prompting the student to question whether or not college is the right place for them. This information is gathered to develop an academic coaching plan, which the student and staff create collaboratively, to assist the student in working toward academic success.

The individualized academic coaching plan typically requires the student to meet with their academic coach every week to two weeks until midterm. Thereafter, meetings are reduced in frequency to determine the student’s ability
for independent success. Over the course of the semester, students receive coaching on the LASSI strategies appropriate to their needs such as: reducing anxiety, raising motivation, developing a positive attitude, developing ability for selecting main ideas in text and reading comprehension, time management, study skills, and test-taking skills. In addition, students and their coaches have key conversations about the student’s identity and efficacy. In the final appointment for the semester, students take the post-LASSI. These assessment results are used to identify and celebrate the students’ growth and success, and highlight areas for further development.

At the end of each fall and spring semester, the College of Education Student Services staff compiles data from the LASSI to show trends experienced by students from each of the retention programs. Data is also compiled to highlight the successes or challenges in the programs, including percentage of students who attended meetings, frequency of meetings, and percentage of grade point average increased.

Overall, the College of Education Student Services office at Northern Illinois University has determined that incorporating the Learning and Study Strategies Inventory as a quantitative measure of ability and a guide for qualitative information gathering within retention programing has been a valuable addition. Its visual representation of measured student ability provides an invaluable tool in recognizing strengths and challenges in students’ academic strategies as well as providing a basis for goal setting.