FRESHMAN SEMINARS

Just in Time: Helping Students Become More Strategic, Self-Regulated Learners
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Using the LASSI as a Learning Tool for Freshman Students
Mary Jean Stanton, Mount Mercy College

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Sonia Micin, Natalla Farlas, Sergio Uzua and Beatriz Carreno
Universidad San Sebastian, Chile; Translation: Cristian Oyarzun

LASSI for Life: Cornerstone of International Freshman Seminar Prediction Profile for Academic and Professional Success via Metacognition and Self-Discipline
Jane Ryan Desnouee, Ed.D., Lehigh University
One of the greatest challenges to combat high levels of first year attrition is delivering timely and targeted assistance to students when they would benefit most from those support services. The *Just in Time: Helping Students Become More Strategic, Self-Regulated Learners*, diagnoses student learning deficiencies and provides resources and academic support throughout the freshman year.

During 2002-03, a pilot phase of the project was implemented. A cross-section of the students completed the LASSI, and UC provided some additional interventions to enhance the students’ transition to college. In 2003-04 the project will be expanded to include all freshmen and multiple intervention strategies which are outlined below.

Grounded in Weinstein’s recommendations, a series of interventions are in place intended to help students become more effective learners. The *Just in Time* project is multi-dimensional, incorporating the online LASSI assessment, LASSI Self-guided Modules, locally developed programs and services, and a multi-tiered communication strategy with students. In addition, the LASSI data will be used in a university-wide research and assessment initiative focusing on student retention and academic success.

**LASSI Administration:** Online LASSI is administered during Orientation to all entering freshmen in attendance. Those not
attending will have opportunities to complete the LASSI during Fall term. Student Orientation Leaders are trained to discuss the general implications of the scores as a part of the two-day orientation program. In addition, the LASSI scores are made available to faculty and advisors via the student information system and through a Blackboard community.

**LASSI Modules**: All students will have modules available for their use. In addition, faculty are encouraged to incorporate the modules in their course materials as assignments, extra credit, or supplemental work. Advisors and tutors will also use specific modules based on the individual student needs.

**Locally-developed Programs and Services (for students)**: Some of the programs and services developed are:

- College based orientation programs and retreats are utilizing LASSI results as a topic area for small group sessions and activities.

  - Student workshops have been developed by Tutoring Services related to many of the LASSI scales.

**Locally-developed Programs and Services (for faculty/staff)**: Some of the programs and services developed are:

- A workshop which provides a general overview on interpretation of LASSI results. Breakout sessions suggest strategies for LASSI use by advisors, tutors, etc.
- A mini-session for college specific training sessions geared toward faculty teaching First Year Experience/College Success courses.
- Blackboard community with LASSI scores, related information, and associated published articles, etc.
- An intra-university listserv for users.
Communication Strategy with Students will incorporate email distribution of information specific to students’ needs based on their scores and usage of the modules. The purpose is to get them better connected with the on-campus student support services.

Research and Assessment: UC is completing a pre/post-test analysis of the first year through the utilization of LASSI scores as one measure combined with non-obtrusive data pulled from the student information system (retention, cum GPA, hours toward graduation, etc.).

The Just in Time program has the potential of significantly affecting institutional retention goals in many ways. First, this is a very cost-effective approach. The LASSI self-guided modules will be accessible to all faculty and students at any time throughout the academic term. Second, if the exercises are incorporated into Blackboard, faculty, who use Blackboard, could monitor student usage and ultimately assess if this on-line approach has a positive impact on student success in their classes that is clearly linked to improved institutional retention. Third, the Just In Time program provides the seamless and transparent linkages, starting at summer orientation and extending into the academic year, including the instructor, student, and support services. Past research supports these collaborations as critical in any successful institutional retention plan. And finally, preliminary findings from the evaluation of the first year pilot phase of our project emphasized the importance of student involvement in multiple retention-oriented activities. The more comprehensive project described above will, by its very design, provide additional retention-oriented contacts at critical times in the academic term in many formats and modalities.
Using the LASSI as a Learning Tool for Freshman Students

Mary Jean Stanton, Mount Mercy College

My experience with LASSI began in 1989 at the University of Iowa while teaching in the Freshman Rhetoric Program and the Reading Lab. Under the direction of Dr. Linda Johnson, we used it as a screening for students who accessed our services and as a pre and post assessment instrument in our work with individuals referred from freshman Rhetoric classes.

When I began teaching at MMC and directing the Academic Center in the fall of 1990, I ordered the LASSI for use in the developmental courses we offer through the Center. It became one of the primary diagnostic assessment tools used in both the 1 credit hour Learning Strategies course and the 2 credit hour developmental English courses. It not only gives me information, but shows students where they are in respect to preparedness. Then we can begin to talk about the skill development needed to reach academic success. Students often don't know what behavior to change and after taking and discussing the LASSI, they have a better understanding of their strengths and weaknesses. Students then write in journals about the experience of taking the LASSI and their scores in each category. They set performance goals for all classes based on results and reflect throughout the term on learning and study strategies. They monitor skill development during the semester, writing a reflection paper at midterm.

At the end of the semester as part of the learning portfolio, they answer the questions on the post LASSI evaluation sheet.
Questions require them to address each area of the LASSI and analyze their performance. The essay question asks them to write a letter to an incoming freshman student, perhaps a younger brother or sister, giving advice and reflecting on what they wish they had known as they entered college. I've also used the LASSI in individual academic counseling sessions with students to build awareness and self-observation ability. It can be an effective motivational tool that leads to SMART goal setting and a plan for changing behavior. (SMART = specific, measurable, action oriented, realistic and timely)

In the fall of 2006, MMC began requiring the developmental English course, EN 012, for all at risk freshmen. (At risk is defined by admission committee) The content from the 1 credit hour learning strategies course was folded into EN 012, making the English course 4 credit hours. A total of 27 students enrolled in the class. I ordered the Web LASSI and administered it again pre and post. The students enjoyed the ability to use the online educational tool and we could immediately review the results. The entire process became more "user friendly" when the instrument was scored online for students and they could perform the assessment at the computer. Post LASSI results showed maintenance or improvement in all areas for all students but one. That student failed to attend classes and later withdrew from school.

Follow-up research and data from the initial 4 credit hour pilot course in 2006 shows that the students persisted and
completed the first year of college with grade point averages of 2.3 and above. Students also succeeded in the second semester 4 credit hour writing course, one withdrawing to take it at a later date. I believe one of the strengths of the LASSI is that it addresses some pertinent areas in college level reading abilities. The 4 credit hour developmental course has been a success and the decision was made to retain it as part of the freshman writing program when we adopted our new core curriculum model last year. The LASSI requires that students critically evaluate their own learning and actively participate in a plan for success. In short, it demands that they become responsible and involved learners, planning for their own progression in college. Student evaluations of the course have been overwhelmingly positive. I continue to use the LASSI in individual sessions with students, too. Following are some end of the semester evaluation comments from students enrolled in EN 012:

1. Information from the LASSI was very helpful and clearly presented.
2. This class helped me know myself as a learner and what I need to do to improve.
3. Taking the pre and post LASSI was beneficial to me and I think you should keep it as a part of the class.
4. Besides becoming a better writer, I learned new study and reading skills that helped me in my other classes.
5. I will use the skills developed in this course for my whole college experience.
6. At first I didn't think I needed this class but I'm glad I took it. I'm a much better student and writer now and that's important to be successful.

7. I learned about myself and what I need to do in order to study and to become a better writer. Small class discussions helped.

**learning abilities.** The implementation of learning strategies, like the writing process, involves application and practice. My biggest joy is when I see these students persist and progress to graduation. In this sense, the LASSI can be considered an important retention tool.

After twenty years and seeing consistent success using the LASSI, I think I'll continue using this valuable educational tool. The key, I believe, is in orally discussing the results and having the students write about their learning goals during the entire semester, monitoring the ups and downs. Students are going through so many transitions that first freshman semester that this gives them some sense of control as they make plans and own their
Relevance of Study Skill, Attitudes and Behaviors For First-Year Freshman
Lynne Stamoulis, Ed.D., Texas A&M International University

In the spring of 2007, Texas A&M International University (TAMIU) completed a year-long Foundations of Excellence® self study, which culminated in a set of recommendations to strengthen its First-Year Experience for incoming freshmen. Among the many recommendations made by the Foundations of Excellence self study group were to enroll incoming freshmen into learning communities, to articulate overall student learning outcomes for the First-Year Experience, and to develop an assessment plan to determine the extent to which first-year students were achieving those outcomes.

For TAMIU, the term, "First-Year Experience" includes, but goes beyond the required freshman seminar and courses linked to it in the learning communities, to include all coursework and experiences, in and outside of the classroom. Eight student learning outcomes, aligned with TAMIU's Principles of Undergraduate Learning, were articulated for the First-Year Experience. One of the First-Year Experience learning outcomes was that students would "improve specific attitudes and behaviors that lead to academic success."

In the inaugural year of the first-year learning communities at TAMIU (2007-2008), the Learning and Study Strategies Inventory (LASSI) was utilized to explore linkages between study skills, attitudes and strategies, freshman academic success, and first-year retention; and to measure student gains in study skills, attitudes
and strategies over the course of the First-Year Experience. The LASSI was administered twice to the same cohort of first-year freshmen: once early in their first semester of enrollment (Fall 2007), and once again at the end of their first academic year (Spring, 2008).

The LASSI consists of ten scales: Anxiety, Attitude, Concentration, Information Processing, Motivation, Selecting Main Ideas, Self Testing, Study Aids, Test Strategies and Time Management. It is important to note that the LASSI is not a performance-based assessment, but a perceptual survey where students complete Likert-type scales indicating the extent to which statements in the inventory are "typical" of them. Each LASSI scale consists of the combined scores of eight questionnaire items, which are spread randomly throughout the inventory.

The LASSI pretest was administered to 436 TAMIU First-Year freshmen enrolled in the UNIV 1101 freshman seminar in October of 2007. Students were directed to the testing center to take the inventory in its on-line administration mode. The LASSI post-test was administered to 447 First-Year freshmen enrolled in the second semester of the freshman seminar, UNIV 1102, in late April and early May of 2008. The researcher was able to match pre- and post-test records of 334 First-Year freshmen to determine gains in study skills, attitudes and behaviors over the course of the first year of academic study.
Higher LASSI Scores Are Associated With Higher Academic Achievement

The LASSI pretest scores of 431 First-Year TAMIU freshmen were compared to the grades they earned that same semester (Fall 2007). Although there was no significant difference between the LASSI scale scores of students whose semester grade point averages were below a 2.0, and those students whose averages were 2.0 to 2.99, the LASSI scale scores of students who averaged at least a 3.0 were significantly higher than those of students in either of the other two grade categories.
Although causality cannot be inferred, higher scores on some of the LASSI scales are associated with better academic performance among TAMIU freshmen, and higher LASSI scores appear to be useful predictors of academic achievement above a 3.0.
48.5% of the students who scored above the group average on the Anxiety Scale went on to earn a 3.0 average or above for their Fall semester grades, compared to only 34.7% of the students who scored at or below the group average on the Anxiety Scale (p = .006).

50.6% of the students who scored above the group average on the Attitude Scale attained a Fall semester GPA of 3.0 or above, compared to only 30.8% of the students who scored at or below the group average on the Attitude Scale (p = .000).

48.5% of those students who scored above the group average on the Concentration Scale earned Fall semester grades averaging at least 3.0, compared to only 35.4% of the students who scored at or below the group average (p = .008).

46.9% of the students who scored above the group average on the Information Processing Scale earned Fall grades averaging at least 3.0, compared to only 36.6% of the students who scored at or below the average (p = .039).

54% of those students who scored above the group average on the Motivation Scale earned Fall semester grades averaging at least 3.0, compared to only 29.2% of those students who scored at or below the group average (p = .000).

There were no significant differences between those scoring above or below average on the Self Testing, Select Main Ideas, or Study Aids scales when it came to earning a Fall semester GPA of at least 3.0.

47.9% of the students who scored above the group average on the Time Management Scale earned a Fall semester GPA of at least 3.0, compared to only 34% of the students who scored at or below average on that scale (.005).

49.1% of the students who scored above the group average on the Test Strategies Scale achieved a Fall semester GPA of at least 3.0, compared to only 33.8% of the students who scored at or below the group average (.002).
Higher LASSI Scores Are Associated with Student Persistence

First-Year persistence patterns were examined. Students in the Fall 2007 first-year freshman cohort who dropped out of TAMIU before the fall of 2008 had significantly different scores on seven LASSI items, than students in the same cohort who persisted. First-Year freshman behaviors which seem to signal high risk of attrition include:

- Not setting goals for the grades wanted in classes,
- Worrying when taking tests and allowing that worry to interfere with concentration,
- Worrying about flunking out of school,
- Getting distracted from one’s studies,
- Not setting aside more time to study subjects that are difficult,
- Getting behind in class assignments, and
- Going to one’s instructors for help when having trouble with class work.

See Table on Following Page
<table>
<thead>
<tr>
<th>ITEM</th>
<th>MEAN SCORE OF PERSISTERS</th>
<th>MEAN SCORE OF NON-PERSISTERS</th>
<th>SIGNIFICANCE (95% CONFIDENCE LEVEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#42. I set goals for the grades I want to get in my classes. Descending scale.</td>
<td>3.94</td>
<td>3.52</td>
<td>.001</td>
</tr>
<tr>
<td>#43. When I am taking a test, worrying about doing poorly interferes with my concentration. Descending scale.</td>
<td>3.08</td>
<td>2.68</td>
<td>.007</td>
</tr>
<tr>
<td>#46. I worry that I will flunk out of school. Descending scale.</td>
<td>3.15</td>
<td>2.74</td>
<td>.021</td>
</tr>
<tr>
<td>#55. I am very easily distracted from my studies. Descending scale.</td>
<td>2.92</td>
<td>2.60</td>
<td>.019</td>
</tr>
<tr>
<td>#62. I set aside more time to study the subjects that are difficult for me. Ascending Scale</td>
<td>3.38</td>
<td>3.07</td>
<td>.016</td>
</tr>
<tr>
<td>#65. I am up-to-date in my class assignments. Descending scale.</td>
<td>3.95</td>
<td>3.65</td>
<td>.008</td>
</tr>
<tr>
<td>#66. When I am having trouble with my coursework, I do not go to the instructor for help. Ascending scale.</td>
<td>3.29</td>
<td>2.97</td>
<td>.020</td>
</tr>
</tbody>
</table>
LASSI items are scored on a five-point Likert-type scale, where students are asked to pick a point along the scale which is a, "Not at all typical of me," b, "Not very typical of me," c, "Somewhat typical of me," d, "Fairly typical of me," or e, "Very much typical of me;" These scales are either ascending, where a = 1 and e = 5, or descending, where a = 5 and e = 1.

**LASSI Pre- and Post-Test as a Measure of Value Added by the First-Year Experience**

Details about TAMU first-year freshman gains on the LASSI scales over the 2007-2008 academic year are provided in a set of tables in Appendix A. In these tables, the LASSI scale score information is banded in yellow, followed by information on each of the eight inventory items which contributed to the scale score. Mean differences are given (column 6), along with statistical significance (column 9), and effect size (column 10). In the tables, statistical significance is indicated by a green border around the cell, and effect size of .20 or larger is indicated by a red border around the cell.

Effect size is a standardized measure (the mean difference of scores divided by the standard deviation) of the extent to which two means are different (lack of overlap given error margins). It is a statistical convention to show the possible effect of an intervention on mean scores (.20 is small, .50 is medium, and .80 is large).

Given that the 2007-2008 academic year administration of the LASSI was TAMU's first use of the inventory to measure value added by the First-Year Experience, it is impossible to be certain if changes are due to student maturation or something intentional in the First-Year Experience. Having established these 2007-2008 scores as benchmarks, however, will allow TAMU to interpret future changes more precisely.

First-year students who entered TAMU Fall 2008 will take their LASSI post-test in late April of 2009. Their gains in study skills, attitudes and behaviors
will be compared to those of the 2007 cohort, whose results are reported here.

Changes over the 2007-2008 academic year indicate some possible early successes of the First-Year Experience.

- The largest positive effect (.28) of the First-Year Experience was to reduce students' anxiety about their academic performance or about approaching academic tasks.
- The next largest positive effect (.22) was to improve the test strategies of students, followed by improving their ability to select main ideas (.18), and to concentrate (.14).
- Somewhat disturbing and worth examining was that the First-Year Experience had a negative effect (-.21) on students' attitudes about academic work.

Ongoing administration of the LASSI as an assessment tool will help TAMIU continually sharpen the focus and effectiveness of instruction and support services for first-year students to enable them to build stronger study skills, attitudes and strategies. This study suggests that strengthening the study skills, attitudes and strategies of first-year students will pay high dividends when it comes to their persistence and academic achievement.

Policy Center on the First Year of College – Foundations of Excellence®,
http://www.fyfoundations.org/
The Center for Academic Development at AUI (Al Akhawayn University of Ifrane, Morocco) offers three academic support courses to all its freshman year students to enhance their learning and study skills, information literacy skills, and critical thinking and analytical skills. The first of these courses, Learning Strategies and Study Skills, is designed to help the students develop learning strategies and study skills that are necessary for success at university. The students are trained in the three areas of strategic learning (i.e., Will, Self-regulation and Skill). They are instructed on how to increase their self-efficacy and improve their attitude towards their own studies through self-motivation. They are also trained to self-regulate and take responsibility for their own learning through tasks that require them to reflect on as well as evaluate their current study and life habits and implement new strategies to improve their learning; they are introduced to how to manage their time and structure their work, set realistic short and long term goals, monitor their progress as well as evaluate the effectiveness of their strategies in achieving their goals. Finally, the students are trained in university-specific study skills such as active listening and note-taking, interacting with their professors, previewing and reviewing course material, selecting main ideas, self-testing, test preparation and test-taking.

Upon a recommendation made by the Course Development Committee in the summer of 2008, the University agreed to
purchase the LASSI pen and paper inventory for all its freshman year students and a subscription for the LASSI Online Instruction Modules. The Committee chose the LASSI among the many other instruments that are available commercially or free of charge thanks to its widely attested diagnostic strength. The LASSI inventory is a 10-scale, 80-item diagnostic and prescriptive assessment of students learning behavior; it was decided by the Course Development Committee to be used primarily as a diagnostic test to assess the students’ awareness about their use of learning and study strategies related to skill, will and self-regulation components of strategic learning; it was believed that the LASSI pre-test scores would raise both the students’ and their professors’ awareness as to which kind of learning strategies the students used and how they used them. We thus hoped that by analyzing the scores the students’ responses would turn in, we could obtain somehow reliable information about the learning areas the students would need to improve in order to succeed in university. It was also reckoned that administering a LASSI pre-test at the beginning of the course and a post-test at the end would help faculty evaluate the course and adjust its instructional units to better cater for the students’ most urgent learning difficulties. In our case in which academic support courses are part of the common core courses, it was aspired that by administering the LASSI inventory to all the students before taking the
course we could persuade the most skeptical of them about the extent to which they were all in dire need of a course that could smooth their transition from a mainly teaching environment to a learning environment, and from a Moroccan educational system to an American one. In other words, we believed that because the students were expected to learn soon after they started taking the course that academic support courses, workshops and tutoring are ordinarily offered in most universities only to so-called ‘under-prepared’ or ‘at-risk’ of failure students, their LASSI scores would hopefully improve their attitude towards the course and thus increase their motivation to adopt it as a means to improve their academic performance and succeed in university.

The following is a brief outline about how the LASSI inventory and the LASSI online instruction modules were used in the Center during the Spring semester, 2009. The students took the LASSI pre-test in the first week before any academic support instruction was offered. As English is the third or fourth language for most of the students, instruction as to how to complete the survey was also given in spoken Arabic and French. A help sheet including instructions on how to take the LASSI test and a glossary of ostensibly difficult words was prepared in advance and handed to them along with the test. After scoring the pre-test, most students recognized they had problems in some of the areas as indicated by their scores. Only a few of them
reported that the results the pretest turned in did not quite match the learning difficulties they had been previously diagnosed for.

The scores were used to guide the students’ choice of the LASSI online instruction modules they were required to complete individually and independently of their instructors’ guidance. The LASSI online instruction modules offered the students a valuable opportunity to reflect about their academic strengths and weaknesses and gave them guidance as to how to work out strategies to solve issues related to their will, skill and self-regulation and improve their academic performance.

Because we do not expect the students’ academic behavior to change in one semester, though we assume it may improve a little, and because we are more concerned about whether and how the students will be able to transfer the newly acquired learning strategies and study skills offered by the course and through the LASSI Instruction Modules to other courses in their regular programs and use them spontaneously in other environments (the library, at home, etc.), we decided to withhold the administration of the post-test until the same students have completed the two other CAD courses and taken at least six of their majors courses over two semesters. Moreover, it is feared that a post-test right after and as part of an academic support course in which the LASSI instruction modules are assigned will tend to turn in rather inflated and thus unreliable information about the students'
improvement.

Therefore, we believe that it is too early to make any sound verdict about the effectiveness of the course and LASSI and about how or whether the newly acquired learning and study strategies will enhance the students’ academic performance. As we do not have a control group of students who have not taken the course and the LASSI test and instruction modules, we are unable to assess with a reasonable degree of precision whether and to what extent the course and LASSI will have some positive impact on the students’ learning. We are currently thinking of developing an adapted academic behavior assessment instrument and administer it to two groups of students, those who took the new course and LASSI in the Fall, 2008 and Spring, 2009 and those who took a previous academic support course prior to Fall 2008 and which did not include LASSI.
Like many professors who teach a first-year seminar, helping students develop good study skills is a major objective of my seminar. When one looks at the Summary of Results from the National Survey on First-Year Seminars, conducted by the National Resource Center for the First-Year Experience and Students in Transition, University of South Carolina, the importance of helping students develop good study skills is apparent. When respondents were asked to identify the most important course objective of their first-year seminar, the most frequently reported objective was the development/fostering of academic skills (54%, 2009; 64%, 2006; 56%, 2002).

The importance of developing good study skills was further supported by a survey conducted several years ago by several members of our faculty in which we asked our students to rank in descending order (most beneficial to least beneficial) the chapters of our textbook. "Learning Strategies for Academic Success" and "Time Management," respectively, were ranked as the two most beneficial chapters.

Considering the importance placed on developing good study skills, I decided to enhance my focus on them. Although I'm required to cover study skills/academic strategies, I begin each semester with limited knowledge of the individual or class-specific study skills needs of my students. Likewise, most of the students enrolled in my seminars have minimal to limited knowledge of
their individual study skills needs (strengths and weaknesses). Students have different combinations and varying levels of study skills needs. Determining what their specific study skills needs are and the varying levels associated with those needs is important if I want to provide instruction tailored to address those needs. Additionally, I wanted to be proactive in my approach and engage students through active learning strategies.

In addition to determining their specific study skill needs, I need that information at the very beginning of the semester. Having this knowledge at the beginning of the semester affords me the opportunity to develop a syllabus and instructional materials focused on these needs. Because there are so many study skill possibilities, I limited my focus to the ten scales of the Learning and Study Strategies Inventory (LASSI): Attitude (ATT), Motivation (MOT), Time Management (TMT), Anxiety (ANX), Concentration (CON), Information Processing (INP), Selecting Main Ideas (SMI), Study Aids (STA), Self-Testing (SFT), and Test Strategies (TST).

Because each student reacts differently within the same academic environment, providing each student the same set of study skills concepts and principles is not the most effective method of providing study skills instruction. Each student is uniquely different, requiring a unique combination/set of study skills to maximize his/her learning potential.

To address this unique individual and class-specific
study skills needs of students within my seminar, I developed a six-step method. The six-step method required me to: (1) select a statistically valid and reliable tool for the diagnosis of study skills that is compatible with my study skill scales, (2) identify the individual and specific needs of each student and the class as a whole (both strengths and weaknesses), (3) adjust my syllabus based on those identified needs, (4) tailor my instructional approach to address those identified needs, post student enrollment, (5) assist students in developing an Individual Study and Learning Plan based on their diagnostic results (LASSI) and, (6) assess the progress of the class at the end of the semester.

It's important to note that all students, regardless of skill-level, can benefit from improved Study Skills (Sylvan Learning Center, 2012)

**My Six-Step Method:**

1. I selected a statistically valid and reliable tool that was both diagnostic and prescriptive
2. I required students take LASSI on the second day of class at the very beginning of the semester.

**Before students took LASSI, I assured them that:**

- LASSI is not an IQ test
- There are no right or wrong answers
- LASSI is designed to assist students at all levels of the Grade Point Average spectrum
- Students will not be differentiated, categorized, or grouped in class based on their LASSI scores
• LASSI scores have no effect on their final course grade
I explained to my students that I put LASSI in place to:

• Diagnose their individual study and learning skill strengths and weaknesses
• Assist them in designing a plan for enhancing their study skills strengths and improving their study skills weaknesses.
• Assist them in prioritizing their study skills needs
• Assist them in developing a plan for improving their overall probability for academic success
• Increase their self-awareness regarding their study skills profile
• Provide them with empirical data that will let them know if their perceptions of their study skills strengths and weaknesses were accurate or inaccurate

• Provide them strategic assistance in the development of their Individual Study and Learning Plans (ISLP)
• Assist me in developing targeted instruction to accommodate their individual and class-specific needs

3. I calculated class-specific strengths and weaknesses to develop a class profile. The class profile was based on averages of the collective individual scores of the class (see table 1).

4. I structured syllabus and class lectures to address class-specific strengths and weaknesses based on the class profile. I focused on the four lowest scores. Final scores were determined using Table 26 of the National Norms for the LASSI, 2nd Edition.
5. I required each student to develop an Individual Study and Learning Plan (I provided the template) based on their individual LASSI results.

6. I required each student to take the second LASSI (post-LASSI) at the end of the semester to measure their progress. Tables 2 & 3 reflect class-specific profiles.
Table 2: Second Class Profile, end of the semester

<table>
<thead>
<tr>
<th>Area</th>
<th>Score Range</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>75-100</td>
<td>If you scored above the 75 percentile on any of the ten LASSI scales, you probably do not have to give a high priority to improving your strategies in those areas.</td>
</tr>
<tr>
<td>Attitude</td>
<td>50-75</td>
<td>If you scored between the 75 and 50 percentiles on any of the ten LASSI scales, you should consider improving your strategies in those areas.</td>
</tr>
<tr>
<td>Concentration</td>
<td>0-50</td>
<td>If you scored below the 50 percentile on any of the ten LASSI scales, you need to improve your skills to avoid serious problems succeeding in college.</td>
</tr>
</tbody>
</table>
Based on these LASSI results, (the class average was below fifty in eight areas) the class needed to improve in the areas of: Attitude, Concentration, Information Processing, Motivation, Self-Testing, Study Aids, Time Management, and Test Strategies. Class average the class should consider improving in three areas (Anxiety, Selecting Main Ideas). Due to time constraints, I selected the four lowest areas (Attitude, Time Management, Test Strategies, and Concentration) for targeted and tailored classroom instruction. Targeting these four areas did not mean the other areas (both strengths and weaknesses) were not covered, but these four areas received the primary focus of classroom instruction. Additionally, putting this information in graph form allows students to prioritize the order and degree to which each strength and weakness should be addressed.
Scores within three of the four targeted class-specific areas improved to the extent that scores moved from the category of "Need to Improve" to "Should Consider Improving".

Students whose individual LASSI scores did not improve (on the second LASSI) to the extent that they did not move out of the "Need to Improve" area (score fell below 50) within any given scale were asked to consider revamping their ISLP and changing their behaviors. The student's grade on this exercise was not based on their LASSI results but based on the in-depth and substantive analysis put into developing and implementing their ISLP.

**Conclusion**

This six-step method provides an example of a customized and purpose-guided approach that engages students in developing strategies for improving their individual study skills. This method requires students address their individual and unique study skill challenges and to focus attention on developing and utilizing practices that engage them in personal ways. This process fosters a responsibility for self-learning and self-awareness. Considering the transitional and often complex needs of first-year students, it is imperative that schools do what they can to assist students in establishing good study and learning skills.

Customizing instruction for individual and class-specific needs increases the probability for academic success and first-year retention. Schools often experience their highest attrition and lowest retention rates among first-year students. Assisting students in developing good study skills increases the probability of increased retention and decreased attrition.
Based on the overwhelming number of positive student evaluations and empirical data supported by the LASSI, the six-step method was successful. Students were very engaged and appreciated the focus on their individual and class-specific needs (strengths and weaknesses). Additionally, LASSI results suggest that study skills development did improve.

The degree to which students received higher grades based on this method requires a much more detailed and comprehensive study. What I can say is, students made positive steps towards maximizing their academic potential because they have knowledge of their study skill strengths and weaknesses and they've put something in writing based on self-assessment, self-reflection, application, and research.
Background

The rapid increase of Chilean tertiary education system, which today encompasses, according to the National Education Council (CNED in Spanish) sources, 989,034 students (48% of population aged 18-24), has resulted in a change of the profile of the student body, now characterized by a high social heterogeneity (Ezcurra, 2005; Rezabal, 2008, PNUD, 2010). This phenomenon is mainly based on the access to higher education available to a large amount of students from lower income quintiles, which were previously excluded from this educational level (Fukushi, 2012; Canales y De los Rios, 2009; OECD, 2009).

This opens new challenges for higher education institutions, in relation to prepare these new students whose college readiness would be strongly influenced by the quality of education that young people received from different social strata in Chile.

For this qualification, it is required to know what it is the profile of the students that the university receives in its regular undergraduate programs. For this, and as part of its strategic plan, Universidad San Sebastián (USS), through the Performance and Student Support Center (CREAR-USS), has developed the Initial Academic Characterization Instrument (ICAI in Spanish), whose main objective is to generate information about students in terms of variables relevant to learning, performance, and adaptation to the university context. Thus, having a comprehensive profile of
new students entering first year at the USS has allowed, on one hand, to generate support programs that suit to their initial requirements and academic difficulties and, on the other hand, to provide feedback and strengthen psychoeducational interventions developed by CREAR-USS as well as by other academic units.

**About Initial Academic Characterization Instrument (ICAI)**

In 2012, on its first version, ICAI achieved 89.9% evaluation of the USS freshman population (corresponding to 5,288 students), while in 2013 succeeded on evaluating 88.2% of the population (corresponding to 5,017 students).

ICAI is a complex and multidimensional instrument that consists of three parts:

1. **Sociodemographic Questionnaire.** It was constructed based on a literature review about the processes of dropping out / retention in Chilean higher education. The considered variables are: members of the family group, parents' educational level, employment status of the student, dependence, type and socioeconomic classification of the schools of origin, high school scores and the University Selection Test (PSU).

2. **Primary Mental Abilities Test (PMA)**. The PMA test was incorporated, based on L.L. Thurstone contributions on the study of cognitive skills in students to identify a development profile in four areas: verbal, numerical, spatial, and logical reasoning. This test can identify areas to be enhanced as well as the cognitive abilities that can be considered as resources.
1. Study and Learning Strategies Questionnaire (CEEA in Spanish) 2. This questionnaire, developed by Weinstein and Palmer (LASSI on its original version), measures the use of learning and study strategies in the students, related to the components of strategic learning model (Skill, Will and Self-Regulation). Thus evaluates thoughts, attitudes, behaviors, motivations, and beliefs that relate to a successful integration process to college and can be modified and improved through psychoeducational interventions. In the case of the students tested by ICAI, the questionnaire would show study and learning strategies developed in previous educational settings and their projection to the new university scene.

The ICAI evaluation is performed to new students joining the University through a web platform (in computer labs), which is managed by examiners who were rigorously trained on an evaluation protocol.

The results of this analysis are delivered through reports to the directors of each career. These are deepened and contextualized, according to the profile of each career, in consultant, principals, and teachers meetings.

In 2013, 102 reports per career and 33 reports by school were given, and 34 consultant meetings were conducted.

1 Reliability coefficient between 0.73 and 0.99. 12a edición, TEA Ediciones.

2 Reliability coefficient between 0.73 and 0.99. 2a edición en español, H&H Publishing.
2013 Results.

1. Sociodemographic Questionnaire:
   - 73% reported that they will live with at least one parent during the school year.
   - 28% said that they have a parent who has not completed secondary education.
   - 53% are the first generation in their families to access higher education.
   - 25% reported that they will work during the 2013 academic year, of which 42.7% will do it to fund their studies.

2. Primary Mental Abilities Test (PMA):

   The USS student body had a higher need for psychoeducational support around numerical and verbal skills, compared to the average of the Chilean population. Regarding spatial skills and logical reasoning, USS students showed adequate performance when comparing to that population.

3. Study and Learning Strategy Questionnaire (CEEA):
   - 50% mentioned troubles on concentrating on academic tasks.
   - 47% reported troubles on selecting main ideas.
   - 44% reported difficulties on managing anxiety in academic contexts.
   - 44% reported difficulties on managing time.
   - 42% reported difficulties to manage study aids.
   - 42% informed problems in exam preparation.
   - 41% reported to have problems when processing study information.
The following graph shows the percentage of students in the "Low", "Medium", and "High" categories on each CEEA scale.

CEEAs information makes sense in the light of the investigation by Canales & De los Rios (2009), who argue that the lack of study habits and deficiency in content management, coupled with the distance observed between the learning strategies developed during the school and those required in the university, are a relevant factor for dropping out at the tertiary level. In this way, the problems associated with deficiencies in study and learning strategies may be intensified during the first year, considering the increase in the complexity of the contents in college (Readi, 2011).

**The CREAT-US intervention model.**

The starting point of the intervention model developed by CREAT-US, is to promote learning and study strategies, since it is a trainable process. Acquiring these strategies can allow
students to improve their degree of control over their learning and academic performance (Torrano & Gonzalez, 2004).

Thus, the intervention is based on an early work with study and learning strategies, which in turn would allow the development of the skills required in the new situation that the student is facing. These new, cognitive as well as efficiency, skills in processing information involve a higher level of autonomy and responsibility from the student, which it is a major focus on the LASSI.

One of the main contributions of the results of the ICAI and CEEA tests in particular has been that they contribute to the design of intervention programs. Specifically, leveling programs which enrolled freshmen attend before starting their regular courses. This year, 2013, this intervention included the participation of 37% of all students who entered university (corresponding to 2,315 students).

Through the Academic Leveling Program, CREAT-USS has generated opportunities for reflection and external regulation, strengthening the training of learning strategies with activities that include core course contents with high failure rates (specifically Introduction to Calculus, Chemistry, and Historical Evolution of the Psychology courses).

The relationship between learning strategies and the content and activities of core courses seeks for a greater transfer of knowledge acquired from similar tasks. Thus, displaying teaching strategies into a disciplinary framework makes them visible, making them a practical and ongoing monitoring object of students, who could recognize procedures for solving a task, reflecting on what, how, and why they should do it.

In summary, the early application of CEEA (LASSI in English), allows to timely characterize freshmen regarding their study and learning strategies in order to generate support programs for these identified needs and resources, from the beginning of their
adaptation process to the challenges of university life.

REFERENCES


Tesis_Julieta_Rezaval.pdf (última revisión: Julio 2012)


Over the last twenty-five years, I have used the LASSI as the centerpiece of my “down and dirty” prediction profile, an integral part of our International Freshman Seminar here at Lehigh. Before sharing some tips that I have found to be very useful in convincing our fledglings of their need to ramp up or, in some cases, awaken to the need to develop learning/study skills to promote and optimize a successful academic experience in college, I would like to mention the two-pronged reason for our successful implementation of the LASSI: placing the student within the national norms (indeed, a “black and white” printout has clout) and student investment (in other words, a self-report inventory seems to facilitate trust in instructor expertise, illogical as that may sound). What then is the validity of self-report because, as we educators know, input = output. Let's find out!

To begin with, by way of garnering your trust, allow me to give you a short summary of my relevant credentials. First, I have been a reading specialist, since 1989 and a learning disabilities specialist/reading diagnostician since 2000, specifically teaching in the Intensive English Program (IEP) arena for many years, as well as working as a private diagnostician, performing comprehensive individual student testing/screening/interviewing, in addition to establishing documentation for students with learning differences. Also, I have taught study skills courses at several colleges and universities, as well as in high-risk high school programs,
and counseled developmental students. Additionally, I have worked with and taught students at every level for fifty years, from various countries and cultures, who speak a variety of languages as their first languages, including English.

Therefore, based upon my extensive experience, I can easily say that only a small percentage of students have endogenous learning differences, whereas some difficulties stem from relationships, substance abuse, or family issues, while most students simply lack knowledge of study/learning strategies, preventing them from functioning optimally; equally important, they are unaware that they lack such knowledge. Enter the LASSI whose beauty and precision as a diagnostic tool and a foundation for planning almost any committed student's successful academic career is unequalled, no matter the country, the language, or the milieu. In fact, I have used the LASSI successfully in all instances.

Oh, yes, another important point is that the intensity and rapidity of our IEP at Lehigh precludes post-testing. Nevertheless, I have found again and again, reinforced by students' comments, that the LASSI has been the tool that has put these students on the road to success, given them the track to run on, as my dad used to say—if they have chosen to invest themselves by demonstrating the maturity to plan for their academic and professional futures. Furthermore, the LASSI prompts them to understand that, with such planning, not only can they experience success in college
but also begin to work on future career goals. For example, according to an international student from China:

In Freshman Seminar, I discovered . . . the result of the LASSI test (to be a) significant vehicle to improve my learning and writing efficiency: . . . LASSI surprises me the most at the low scores in Attitude and Interest Scale, and Motivational Scale. The test reveals that my underlying thought towards learning and college is negative. To improve my efficiency, I should accept more responsibilities for my academic outcomes and take advantage of short-term goals to accomplish specific tasks. For instance, if I develop interest in accounting instead of just finishing all assignments on time, I would be motivated to review concepts ahead of time and search more background information which would help my future career and make me interested. . . .”

Now, let me explain my venue for administering the LASSI. Used as the focal point of a constellation of self-reporting inventories that make up the prediction profile, the LASSI is completed by each international freshman for homework in the 5-hour Freshman Seminar. With the goal of including as much interaction, self-reflection, and enjoyment as possible in the plethora of theory and technique that needs to be presented in five hours (2/2.5 hour sessions), completion of a variety of self-reporting inventories is assigned: personality-type, learning style, multiple-intelligence, learning stages, relationship quotient, study skill GPA predictor,
Okay, allow me to set the stage for the LASSI process—we have completed the International Freshmen Seminar (high intermediate to advanced ESL students)—the students have filled out and discussed their inventories during Part B of the seminar—I have mentioned that they may come in for private conferences at will. In addition, in acute cases, I reach out to the student; also, private conferences can be automatically scheduled for each student (my favorite and most effective venue because “seeing is believing” when students are tacitly mandated to look at the LASSI results).

During the one-on-one, a more in-depth study of individual results, I begin by asking the student what he or she has discerned from these inventories in general; and then we begin with the LASSI in particular.
I first ascertain whether or not the student has seriously completed the LASSI; in some cases, a student actually literally begs to take it over because he or she really wasn't serious at first blush but then has realized the error of his or her ways, especially after the self-reflective nature of the capstone project—a qualitative evaluation by each student of the seminar topics, through a series of one-minute papers requiring the completion of some supplementary reading of the seminar text on each topic (a sobering activity, I might add, according to the responses I have received, anyway).

First, the student is given an overview of the 10-subscale profile of the LASSI, scaffolded with the clearly targeted, indeed powerful and concise, LASSI Manual summary of each item (I specifically bring out the manual, reading and referring to it exactly, so the student is aware that we are not relying on my humble knowledge J, but that of a widely used study/learning diagnostic). After the student peruses the LASSI graph, now more aware of sophisticated college reading/writing demands, the 10 subscales are clustered. For example, patterns emerge, which direct the setting up of specific protocols/strategies/schedules for each student's needs. As mentioned to the students during the seminar, prior to the discussion and completion of the varied diagnostics, each of their profiles is unique—it's not one size fits all; therefore, individual strengths and weaknesses are honored. In other words, if students have learning and study strategies that work, the LASSI pinpoints
those areas, giving credence to the positive as well as the negative. On the other hand, if the student has weaknesses that have not been addressed, particular methods exist that may work best for him or her, perhaps only gleaned from individual conferencing/planning.

Now the specific subscale review begins where I have found that some cluster division works very well, usually starting with Information Processing—which gives me lots of clues in regard to learning styles, perhaps differences, even a discussion of the student's history of learning experiences (as the LASSI Manual suggests, “Using what we already know, that is our prior knowledge, experiences, attitudes, beliefs, and reasoning skills to help make meaning out of new information is critical to success in educational and training settings . . . not just the amount of knowledge but the ways that knowledge is acquired and organized”); then we implement suggested LASSI strategies to support this area of study. Next, we move to the Motivation, Concentration, Attitude cluster—discussing what attitude refers to and how that impacts motivation and thereby concentration (again the LASSI Manual is targeted and clear in explanation in this area: “If the relationship between school and life goals, [whether they be] academic, personal, social or work related, is not clear, then it is difficult to maintain a mind-set that promotes good work habits, concentration, and attention to school and its related tasks.”). In fact, we first discuss whether or not the student wants to be at Lehigh and/or if he or she is
currently in a major of choice; then we review the multisensory techniques learned in the Freshman Seminar, especially my favorites, SQ4R and Cornell Notetaking, to promote and enhance amelioration of problem areas. Now is the optimum place to talk about Main Idea—a wealth of material supports this subscale and higher order comprehension skill, always of paramount importance and a major problem for freshmen, especially our international students (LASSI commentary suggests that “if a student cannot select the critical information, then the learning task becomes complicated by the huge amount of material the individual is trying to acquire as well.”). Easily, we segue to Anxiety and, to student dismay, why sometimes anxiety coping skills can be too high, rendering a student cavalier and blasé about work—translated, unproductive and unengaged. Nevertheless, as mentioned in the Manual, “If students are tense, anxious, or fearful about . . . academic situations, this will divert their attention away from the academic task and inward to self-criticism or irrational fears . . . once these attentional blocks are removed, many students show large increases in performance.” From there, it is a short hop to Time Management, where I mention that the national research points to at least 50% of freshmen struggling with scheduling (Gardner & Barefoot, 2014); and then I bring out the daily, weekly, and semester grids that they have completed during the seminar—now interest waxes; “and this array of grids reminds students to create workable schedules, and perhaps, even
more important, it helps students to create the motivation to use them,” according to the LASSI Manual. Finally, we get down to the details of the testing cluster: Study Aids (“Unless students know how to recognize and use these hints and aids, they will not benefit from them . . . also important for students to know how to generate their own study by . . . going to instructor . . . searching for related material on the Web, forming study groups, comparing notes with other students to check for accuracy or completeness,” reports the LASSI; Self-Testing (“Without them [these self-testing strategies], learning could be incomplete or errors might persist undetected . . . strategies both support and contribute to knowledge consolidation and integration across topics.”); then Test Strategies, (“Knowing about test-taking and test preparation strategies and how to use them helps students . . . demonstrate their knowledge and skill acquisition so it can be accurately evaluated,” suggests the LASSI.). Quite seamlessly, relying on the credibility of the LASSI Manual direction of explicit aids and techniques for this final cluster, I reintroduce the student to concrete support materials to promote skill reinforcement as outlined in the Seminar.

All in all, the LASSI is a “black and white” touch point for complete learning and study skill planning, a jumping off place for identifying learning strategies, a focus for a balanced academic life, and a comprehensive review of any student's whereabouts on the learning/study continuum. In a word, effectively processing the Learning And Study Strategies Inventory can be a catalyst for the development of the metacognitive strategies that promote a passion for lifetime independent learning for the sake of learning, not just another easy fix to skate through college academics without acquiring any real wisdom.

References