User's Manual

Learning and Study Strategies Inventory

Third Edition

by

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PART 1: WHAT IS NEW ABOUT THE LASSI, 3RD EDITION?

Most of the changes in the LASSI, 3rd Edition, are in response to student data, user comments, changing practices in the field, and an expanding research base. For example, users requested a shorter version of the LASSI, 2nd Edition; in response we worked to reduce the number of items from 80 to 60, while maintaining the strong psychometric properties of the scales. In response to the changing practices in the field as well as more recent research, we put a greater emphasis on student-initiated help-seeking by creating a new scale. The UAR Scale (Using Academic Resources) was created and replaces the Study Aids Scale.

Summary of the Changes in the LASSI, 3rd Edition

1. The largest change in the LASSI, 3rd Edition, is that we reduced the number of items from 80 to 60. Now each scale is comprised of 6 items as opposed to 8 items. Completing the LASSI, 3rd Edition, will take approximately 9-11 minutes. This change was largely in response to users' comments and requests. This change makes it easier to administer the LASSI, 3rd Edition, in a timely manner while maintaining the psychometric strengths that have made it a standard in strategic and self-regulated learning assessment.

2. We removed the somewhat dated Study Aids Scale and replaced it with a new scale called Using Academic Resources (UAR), which fits with current conceptions and research in self-regulated learning and student learning assistance. All items on the UAR scale are new (and were selected from a larger pool of items used in field testing). UAR measures students' help-seeking preferences and behaviors. For example, do they go to a writing center, or a tutor, or a classmate if they need help with a course or assignment? Conversely, do they avoid seeking help?

3. We added one new item to the Motivation Scale to address students' effort. This is a better fit with current conceptions of motivation components.

4. To improve readability, we made revisions to two items that we kept from the LASSI, 2nd Edition. The wording in Item #5 (TST Scale) was changed from past tense to present tense. The wording in Item #9 (SMI Scale) was changed to use a singular tense.

5. The LASSI, 3rd Edition, has four introspective questions which follow the 60 items. These questions are unscored for the students. Results will be given to the administrator. We expect both students and advisors to benefit from this addition.

PART 2: OVERVIEW OF THE LASSI, 3RD EDITION

What is the LASSI, 3rd Edition, and What Does it Measure?

The Learning and Study Strategies Inventory (LASSI) is a 10-scale, 60-item assessment of students' awareness about and use of learning and study strategies related to **skill**, **will** and **self-regulation** components of strategic learning. The focus is on covert and overt thoughts, behaviors, attitudes, motivations and beliefs that relate to successful learning in postsecondary educational and training settings. Furthermore, these thoughts, behaviors, attitudes, motivations and beliefs can be altered through educational interventions. Research has repeatedly demonstrated that these factors contribute significantly to success in college and that they can be learned or enhanced through educational interventions such as learning strategies and self-regulated study courses and programs.

The LASSI is both **diagnostic** and **prescriptive**. The LASSI provides standardized scores (percentile score equivalents) and national norms for ten different scales (there is no total score reported because this is a diagnostic instrument). It provides students with a diagnosis of their strengths and weaknesses, compared to other college students, in the areas covered by the ten scales; it is prescriptive in that it provides feedback about areas where students may be weak and need to improve their knowledge, skills, attitudes, motivations and beliefs.

How Can the LASSI Be Used?

The LASSI is designed to be used as:

(1) A screening measure to help students develop greater awareness of their learning and studying strengths and weaknesses.

(2) A diagnostic measure to help identify areas in which students could benefit most from educational interventions.

(3) A basis for planning individual prescriptions for both remediation and enrichment.

(4) A tool for tutors and academic coaches to help students identify areas they need to improve for different courses.

(5) A tool for a learning center to use to determine areas of greatest need for workshops, seminars and independent study.

(6) A means for instructors to use for examining individual students' scores and class trends to help them decide where to place the greatest emphasis for assignments, projects, individual logs, journals, portfolios and other class activities.

(7) A pre-post achievement measure for students participating in programs or courses focusing on learning strategies and study skills.

(8) An evaluation tool to assess the degree of success of intervention courses or programs.

(9) An advising/counseling tool for college orientation programs, first-year experience or seminar courses, advisors, developmental education programs, learning assistance programs, and learning centers.

Introduction to the LASSI Scales

There are six items on each of the ten scales of the LASSI, 3rd Edition. These scales are: Anxiety, Attitude, Concentration, Information Processing, Motivation, Selecting Main Ideas, Self Testing, Test Strategies, Time Management, and Using Academic Resources.

Each of these scales is primarily related to one of three of the components of strategic learning: **skill**, **will** and **self-regulation**. The conceptual framework of strategic learning underlies each of these components, so there is some overlap and interaction among and within the components and individual scales. However, strategic learners need to know about each of these categories and about how to use information and skills in each of these categories. They also need to know how to pick and choose among the various elements in each category to help them reach specific learning goals and objectives.

The Skill Component of Strategic Learning

The LASSI scales related to the skill component of strategic learning are: **Information Processing, Selecting Main Ideas, and Test Strategies**. These scales examine students' learning strategies, skills and thought processes related to identifying, acquiring and

constructing meaning for important new information, ideas and procedures, and how they prepare for and demonstrate their new knowledge on tests or other evaluative procedures.

The **Information Processing Scale** assesses how well students' can use imagery, verbal elaboration, organization strategies, and reasoning skills as learning strategies to help learn new information and skills. These strategies are also used to build bridges between what students already know or believe and what they are trying to learn and remember.

Do students try to summarize or paraphrase their class reading assignments?
Do they try to relate what is being presented in class to their prior knowledge?

The **Selecting Main Ideas Scale** assesses students' thinking skills for identifying important information for further study from less important information and supporting details.

Can students identify the key points in a lecture?
Can they decide what is important to underline in a textbook?

The **Test Strategies Scale** assesses students' use of both test preparation and test taking strategies.

Do students know how to study for tests in different types of courses?
Do they review their answers to essay questions?

The Will Component of Strategic Learning

The LASSI scales related to the will component of strategic learning are: **Anxiety**, **Attitude**, and **Motivation**. These scales measure the degree to which students worry about their academic performance, their receptivity to learning new information, their attitudes and interest in college, their diligence, self-discipline, and willingness to exert the effort necessary to successfully complete academic requirements.

The **Anxiety Scale** assesses the degree to which students worry about school and their academic performance.

Do students worry so much that it is hard for them to concentrate?
Are they anxious even when they are well-prepared?

The **Attitude Scale** assesses students' attitudes and interests in college and achieving academic success.

Do students only study for the courses they like?
Is college really important or worthwhile to them?

The **Motivation Scale** assesses students' diligence, self-discipline, and willingness to exert the effort necessary to successfully complete academic requirements.

Are students willing to put in the effort necessary to succeed on academic assignments?
Do they easily "give up" in difficult classes?

The Self-Regulation Component of Strategic Learning

The LASSI scales related to the self-regulation component of strategic learning are: **Concentration**, **Self Testing**, **Time Management** and **Using Academic Resources**. These scales measure how students manage, self-regulate or control the entire learning process. These processes include: using time effectively, focusing attention and maintaining concentration, checking to determine if learning demands for a class, assignment, or a test have been met, and a willingness to seek help from instructors, fellow students, tutors, academic coaches, learning centers and tutoring programs.

The **Concentration Scale** assesses students' ability to direct and maintain their attention on academic tasks.

Are students easily distracted?
Can they direct their attention to academic tasks?

The **Self Testing Scale** assesses students' use of comprehension monitoring techniques, such as reviewing or paraphrasing, to determine their level of understanding of the information or skill to be learned.

Do students create and respond to questions that might be asked on a test?
Do they stop periodically while reading to review the content?

The **Time Management Scale** assesses students' use of time management principles and practices for academic tasks.

Do students procrastinate about completing academic tasks?
Do they strategically manage their time for studying?

The **Using Academic Resources Scale** assesses students' willingness to use different academic resources such as writing centers, tutoring centers and learning or academic support centers, when they encounter problems with their coursework or performance.

Do students go to a resource center for guidance?
Do they avoid going for help?

NOTES:
Sample items for each scale are included in Part 4: Description of the Individual LASSI Scales.
Coefficient Alphas for the scales range from a low of .76 to a high of. 87

PART 3: ADMINISTRATION AND SCORING

The LASSI is designed to simplify administration and scoring as much as possible without losing power or diagnostic information. To help achieve this goal, it uses a self-report format and does not require any special administration procedures, such as specially trained personnel. The LASSI, 3rd Edition, is not a timed measure but most students complete it in approximately 9-11 minutes. The scoring is completed online and the scoring reports are computer-generated and available immediately.

For each of the 60 items on the LASSI, students are requested to select one of the five responses that corresponds to how well the statement describes them. Students are also cautioned to respond according to how well the statements reflect their behaviors or thinking processes and not how they think they should respond or how others would respond.

The LASSI yields ten individual scale scores, one for each of the ten scales. No total score is computed because this is a diagnostic instrument. These scale scores can then be compared numerically or graphically to the norms provided or to local norms or cut-off scores developed by an institution or program. The data provided with the LASSI includes percentile score equivalents. Based on a student's scale scores, either in relation to the national norms included with the instrument or to a percentile cut-off score (the 75th percentile being a common cut-off used on many campuses), prescriptions can then be made. For example, if a student scores poorly on the **Test Strategies** Scale, he/she should be advised to concentrate at least part of his/her efforts on learning more about how to prepare for and take tests. A low score on the **Anxiety** Scale indicates a difficulty with focusing attention on task-relevant thoughts and behaviors rather than on fears and concerns about failure and incompetence. The student doing poorly on this scale would need to learn more about dealing with irrational thoughts and negative self-talk. She or he would have to learn how to cope with anxiety-arousing stimuli and take more responsibility for the direction of her or his own thinking processes.

Each LASSI contains the following parts:

1) An introduction to the inventory.

2) An explanation of how to complete the LASSI.
3) The inventory items.
4) Information about interpreting individual scale scores.

All scoring, reporting, and graphics are generated automatically and available to the administrator. The student also receives individual scores unless the administrator has specifically asked for a *No Student Results* version.

It should also be noted that approximately half of the items use reverse scoring to reduce response bias. Some of the items are stated in a positive direction ("I try to identify potential test questions when reviewing my class material.") while others are stated in a negative direction ("I find it hard to pay attention during lectures."). To get a better overall view of their performance, these total scale scores are shown on a graph using the national norms for each scale to transform the raw scores into percentiles. In this way, relative performance in different areas are assessed.

Students can see how their answers compare to the answers of the norm groups. The graph is also marked off at the 75th and 50th percentiles to facilitate advising and counseling. Students who score above the 75th percentile often do not need to work on the strategies or skills for that scale. Students who score between the 75th and the 50th percentile on any scale should consider improving the relevant learning and study skills to optimize their academic performance. Students who score below the 50th percentile usually need to improve their relevant knowledge and skills to increase their chances of succeeding in a post secondary setting. It should also be noted that these cut-offs could be modified depending on the local setting or the development of local norms. A copy of the national norms used to create the graph can be found in Table 22 of this user's manual. The data in Table 22 represents the percentile score of students in the norm group that fall at or below a given raw score for each scale.

PART 4: DESCRIPTION OF THE INDIVIDUAL LASSI SCALES

ANXIETY

Current conceptions of anxiety emphasize the interactive effects of students' thought processes, beliefs, and emotions along with how they affect academic performance. Cognitive worry, a major component of anxiety, is manifested in negative self-referent statements. These negative thoughts, beliefs and feelings about one's abilities, intelligence, future, interactions with others, or likelihood of success, divert a student's attention from the task at hand, such as studying or taking a test. If a student is worried that he will not have the time to finish a test, then he is just making matters worse by wasting time while worrying about his performance. This type of self-defeating behavior often sabotages a student's efforts. If students are tense, anxious, or fearful about studying or performing in academic situations, this will divert their attention from the academic task and inward toward self-criticism or irrational fears.

Students' scores on this scale measure how tense or concerned they are when approaching academic tasks. Students who score low on this measure (indicating high anxiety) need to learn techniques for coping with anxiety and reducing worry so that they can focus on the task at hand and not on their anxiety. Many very capable students are often incapable of demonstrating their true level of knowledge and skill because they are paralyzed or distracted by debilitating anxiety. In fact, helping some students learn how to reduce their anxiety is sufficient for helping them to improve their performance. Once these attentional blocks are removed, many students show large increases in performance.

Coefficient Alpha = .87

Sample Items:

When I am studying, worrying about doing poorly in a course interferes with my concentration.

I feel very panicky when I take an important test.

ATTITUDE

Students' general attitudes toward school and their reasons, or lack of reasons, for succeeding in school have a great impact on their diligence when studying, particularly in autonomous situations in which they must study on their own. If the relationships between school and life goals (academic, personal, social and work-related goals) are not clear, then it is difficult to maintain a mind-set that promotes good work habits, concentration, attention to school, and its related tasks.

Students' scores on this scale measure their general attitudes and reasons for succeeding in school and interest in performing the tasks related to school success. Students who score low on this measure need to work on higher-level goal setting and reassess how school fits into their future. If school is not seen as relevant to the student's life goals and attitudes, then it will be difficult, if not impossible, to generate the level of motivation needed to help take responsibility for one's own learning and successfully managing one's own study activities.

Coefficient Alpha = .76

Sample Items:

I have a positive attitude about attending my classes.

I only study the subjects I like.

CONCENTRATION

Concentration helps students to focus their attention on school-related activities, such as studying and listening in class, rather than on distracting thoughts, emotions, feelings, or situations. People have a limited capacity to process what is going on around them and in their own thoughts; if they are distracted, there will be less capacity to focus on the task at hand. For students this means that distractions, or anything else that interferes with concentration, will divert attention from school-related tasks.

Students' scores on this scale measure their abilities to direct and maintain their attention to school and school-related tasks, including study activities. Students who score high on this measure are effective at focusing their attention and maintaining a high level of concentration.

Students who score low on this measure are less successful at focusing their attention on the task at hand by eliminating interfering thoughts, emotions, feelings, and situations. They need to learn techniques to enhance concentration and to set priorities so that they can attend to school as well as to their other responsibilities. Learning techniques for focusing attention and maintaining concentration help students implement effective learning strategies and can make learning and studying both more effective and more efficient.

Coefficient Alpha = .85

Sample Items:

My mind wanders a lot when I study.

If I get distracted during class, I am able to refocus my attention.

INFORMATION PROCESSING

Meaningful learning is enhanced by the use of elaboration and organization strategies. These strategies help build bridges between what a student knows and what he or she is trying to learn and remember. Using what we already know (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. The difference between an expert and a novice is not just the amount of knowledge they possess but also, and perhaps even more important, the way that knowledge is acquired and organized. It is the difference between storing one thousand folders by throwing them in the middle of a room versus storing them by some meaningful organization in filing cabinets.

Students' scores on this scale measure how well they can create imaginal and verbal elaborations and organizational schemes to foster understanding and recall. Students who score low on this measure need to learn methods that they can use to help add meaning and organization to what they are trying to learn. These methods range from simple paraphrasing and summarizing to creating analogies, the use of application, creating organizational schemes and outlining, and the use of synthesis, inferential, and analytic reasoning skills. A student who does not have a repertoire of these strategies and skills will find it difficult to incorporate new knowledge and understanding in such a way that acquisition and recall will be effective, often despite the large amount of time spent studying. The effectiveness and efficiency of both

autonomous and classroom learning are facilitated by the use of information processing strategies.

Coefficient Alpha = .81

Sample Items:

To help me remember new principles we are learning in class, I practice applying them.

I try to find relationships between what I am learning and what I already know.

MOTIVATION

The Motivation Scale measures the degree to which students take responsibility for studying, put effort into learning course material, and persist towards reaching their academic goals, especially when facing tasks that are difficult or uninteresting. The Attitude Scale measures students' general attitudes toward school and their reasons for wanting to succeed in school. While the Attitude Scale focuses on positive and negative attitudes that influence motivation, the Motivation Scale focuses on students' levels of academic effort, persistence, and self-diligence. Although general attitudes and general sources of motivation are important, so is a student's motivation to perform the specific tasks related to achievement. These behaviors include reading the textbook, preparing for class, finishing assignments on time, and being diligent in studying, even if the topic is not particularly interesting to them (or even trying to figure out ways to make it more interesting). Students' beliefs also play a big role in motivation. For example, a student who "knows" (believes) he or she just cannot learn math will find that generating motivation to study or go to someone for help is very difficult.

Students' scores on this scale measure the degree to which they accept responsibility for performing the specific tasks related to school success. Students who score low on this measure need to work on goal setting, perhaps at the more global levels assessed on the Attitude Scale, but certainly at the more specific level of individual tasks and assignments. Accepting more responsibility for studying and achievement outcomes requires that students learn to attribute much of what happens to them in school to their own efforts rather than to outside forces such as luck or poor teachers, or to uncontrollable forces such as innate ability.

Accepting more responsibility and attributing success to one's efforts results in more effective studying and academic performance.

Coefficient Alpha = .77

Sample Items:

When work is difficult I either give up or study only the easy parts.

I set goals for the grades I want to get in my classes.

SELECTING MAIN IDEAS

Effective and efficient studying requires that students are able to select the important material for in-depth processing. Most lectures, discussions, and textbooks contain redundant material, extra examples, and many supporting details to help explain what is being taught or presented. A major academic task involves separating the important from the unimportant or simply didactic information that does not have to be remembered. 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. Lacking this skill also increases the likelihood that the student will not have enough time to study everything that must be covered.

Students' scores on this scale measure their skills at selecting important information to concentrate on for further study in classroom, lecture or autonomous learning situations. Students who score low on this measure need to learn more about how to identify important information so that they can focus their attention and information processing strategies on appropriate material.

Coefficient Alpha = .86

Sample Items:

I have difficulty identifying the important points in my reading.

When studying, I seem to get lost in the details and miss the important information.

SELF TESTING

Reviewing and testing one's level of understanding are important for knowledge acquisition and comprehension monitoring. These strategies both support and contribute to meaningful learning and effective performance. Without them learning could be incomplete or errors might persist undetected. Reviewing and self testing also contribute to knowledge consolidation and integration across topics. Using mental reviews, going over class notes and the text, thinking up potential questions to guide reading or help prepare for an exam are all important methods for checking understanding, consolidating new knowledge, integrating related information (both from what is being learned and from what is already known), and identifying if additional studying must be done.

Students' scores on this scale measure their awareness of the importance of self testing and reviewing and the degree to which they use these methods. Students who score low on this scale need to learn more about the importance of self testing as well as specific methods for reviewing school material and monitoring their comprehension. These methods include structured reviews of large amounts of material; mental reviews of individual study segments; asking questions before, during, and after reading, studying, or going to class; trying to use new information in novel ways; trying to apply a principle or method; and using a systematic approach to studying.

Coefficient Alpha = .80

Sample Items:

I stop periodically while reading and mentally go over or review what was said.

To check my understanding of the material in a course, I make up possible test questions and try to answer them.

TEST STRATEGIES

Effective test performance depends on both preparation strategies and test-taking strategies. A student needs to know how to prepare for the type of performance that will be required and how to maximize that performance. Test preparation includes knowing about the type of test

they will be taking. For example, is it going to be a short-answer or a multiple-choice exam? Will performance require simple recall or will concepts, principles, and ideas need to be applied? Test preparation also includes knowing about methods for studying and learning the material in a way that will facilitate remembering the material and using it at a later time. Test-taking strategies include knowing about the characteristics of tests and test items, and how to create an effective test-taking plan.

Students' scores on this scale measure their use of test-taking and test-preparation strategies. Students who score low on this measure may need to learn more about how to prepare for tests, how to create a plan of attack for taking a test, the characteristics of different types of tests and test items, and how to reason through to an answer. Often, students' performance on a test is not an accurate indicator of what they have learned. Knowing about test-taking and test-preparation strategies and how to use them helps students target their study activities, set up useful study goals, implement an effective study plan, and demonstrate their knowledge and skill acquisition so it can be accurately evaluated.

Coefficient Alpha = .77

Sample Items:

I have difficulty adapting my studying to different types of courses.

I review my answers during essay tests to make sure I have made and supported my main points.

TIME MANAGEMENT

Managing time effectively is an important self-regulation strategy for learning. Most students have various demands on their time; only by creating realistic schedules and using them can they fit in much or all of what they need to do. Creating and using schedules also encourages students to take more responsibility for their own behavior. It requires some knowledge about themselves as students and learners. What are their best and worst times of day? Which subjects are easier or harder for them? What are their preferences for learning methods? This type of knowledge and self awareness helps students to create workable schedules, and perhaps even more importantly, it helps students to create the motivation to use them.

Students' scores on this scale measure the degree to which they create and use schedules. Students who score low on this scale may need to learn about how to create a schedule and how to deal with distractions, competing goals, and procrastination. Accepting more responsibility for studying and achievement outcomes requires that students set realistic school goals and create plans that will facilitate goal achievement. Effective time management enhances these activities.

Coefficient Alpha = .80

Sample Items:

I find it hard to stick to a study schedule.

I set aside more time to study the subjects that are difficult for me.

USING ACADEMIC RESOURCES

Students need to know about and how to access and use a variety of academic resources designed to help them understand, learn, and retain what they are studying in their classes. Almost all post secondary educational institutions provide one or more of the following academic success resources: student success centers, learning centers, tutoring centers, academic coaches, writing centers, math centers, and mentoring. Students can also use more localized sources of help, such as instructors' office hours, student study groups and other classmates. When students encounter problems comprehending, learning or applying course concepts and skills, they need to seek help. Even though students may know they need learning assistance, many students are hesitant, even embarrassed, to seek help from others. The research literature on help-seeking suggests three major types of help-seeking approaches used by students: (1) avoidance help-seeking refers to students who do not want to ask for help, (2) executive help-seeking refers to students who just want someone to give them the answer (whether they understand it or not), and (3) instrumental help-seeking refers to students who seek help and want the answer but also want to learn how to do it on their own. Success and thriving in college requires an emphasis on instrumental help-seeking.

Students' scores on this scale measure their awareness, knowledge about, and use (or intended use) of informal and formal academic resources commonly available to students at 2-

year and 4-year post secondary institutions. Students who score low on this scale may need help identifying and effectively using resources as the need for learning assistance becomes apparent. It is important to tell students about tutoring centers and other services at orientation, but students are not generally concerned about grades at that point. After their first assignment or test, the information may be perceived as more timely and relevant. In order to better reach students as their concerns are arising, have representatives of different student support services provide brief presentations during class or as part of a residence life program or other special program. Also, share testimonials from past and current students about their experiences using academic resources. Even when students do not like a course, they still have to learn the information for the final exam or semester project; seeking help can provide students the necessary scaffolding to reach their goals. Students can also develop more effective learning strategies when they seek help.

Coefficient Alpha = .76

Sample Items:

If I am having trouble with a writing assignment, I seek help from resources available at my college such as the writing center, learning center, or tutoring center.

I am not comfortable asking for help from instructors in my courses.

PART 5: THE DEVELOPMENT OF THE LASSI, 1ST EDITION

The developmental work that led to the creation of the LASSI began in 1982 as part of the Cognitive Learning Strategies Project at the University of Texas at Austin. In response to the increasing numbers of academically underprepared students entering post secondary educational and training settings, many institutions were creating programs to address student weaknesses. However, one of the major problem areas in this field related to assessment. The successful implementation of a learning and study strategies course or program requires a reliable and valid means for measuring students' strengths and areas where they need to develop more effective and efficient strategies and skills. In addition, an accurate diagnosis of entry-level skills could be used to create individualized prescriptions for improvement and subsequent assessments, as well as to provide a basis for evaluating the effectiveness of a course or program.

Early Developmental Activities

The first few years of work focused on data gathering. In addition, an analysis was made of existing published and experimental instruments and inventories. We found that the topics encompassed by the terms "study skills" and "learning strategies" varied considerably among researchers, practitioners, and assessment measures. Since there was no consensus concerning definitional components, the initial phases of this work involved an attempt to create a conceptual categorical scheme. To assist in this work, we conducted a survey project to examine the contents of study skills and learning books, manuals, and programs. Input was also gathered from a series of experts in the area.

Development of an Item Pool

Using the data gathered in the first series of studies, an initial item pool was created. This pool of 645 items was drawn from all of the sources used in the early developmental stage. Using a tentative categorical scheme that was developed, expert judges were asked to sort the items into these categories.

During the process of sorting the items, two major problems were identified: first, many items were close duplicates; and second, a number of items fit into more than one category (e.g., time management as a test-taking strategy). The first problem was resolved by eliminating duplicate items and the second was left to be addressed after the initial pilot tests when the categorical scheme could be revised based on both the descriptive and correlational data collected. In addition, items that did not directly deal with study practices (e.g., items about personality and personal characteristics) and items whose content concerned an aspect of behavior or experience that could not be altered by an educational intervention and, therefore, could not be a target for remediation (e.g., "My parents read to me as a child.") were eliminated. Specialists in tests and measurements rewrote items that were confusing, compound items (those containing more than one question or statement in the same item), and poorly worded items.

As a result of these selection processes, the pool of potential items was reduced to 291. Although the LASSI currently uses a Likert-type scale, these initial pilot items were converted to a true-false format. Approximately half of the items were worded positively and half were worded negatively.

Pilot Testing

A preliminary pilot test was conducted to evaluate the administration procedures and to begin collecting psychometric data about the items. Different groups of students completed approximately one third of the items (to reduce the burden of testing for any one individual), a measure of social desirability and a questionnaire about the items and administration procedures. A subset of this population was also interviewed.

The measure of social desirability was used to determine the degree of relationship between responses to individual items and the subject's desire to be socially acceptable, or the degree to which they wanted to "look" good. This response bias can be a major problem for self-report instruments. The post-experimental questionnaire was used to gather information from the students about perceived difficulties, problem questions, and suggested modifications and improvements.

Based on an analysis of this data set and its relation to other student data such as Scholastic Aptitude Test scores, grade-point average, and high school rank, a number of changes were made. First, the format was changed to a Likert-type measure. Second, wording and phrasing changes were made on a number of items. Finally, items correlating above .50 with the measure of social desirability were eliminated. In addition, confusing or unclear items were rewritten or eliminated.

In addition to eliminating items from the potential pool, a number of new items were added. The sources of these new items included: a survey of current research literature in cognitive psychology, responses from students on the post-experimental questionnaire, suggestions from practitioners, and student responses on the Learning Activities Questionnaire, a precursor of the LASSI developed as part of the project.

Two content matter specialists and two psychometricians then examined this new pool of items independently. A revised set of 14 categories containing at least seven items for each category was created. This version of the LASSI had 149 items.

A second pilot test was conducted to evaluate the administration procedures and to examine the properties of the items on the revised instrument. The descriptive data collected and the student comments made during the feedback portion of the administration sessions were used to establish criteria for selecting items for the field test version of the LASSI. This version of the LASSI had 130 items. In addition, a preliminary study of test-retest reliability (with a 3- to 4-week interval) was conducted. A test-retest correlation of .88 was computed for the total instrument.

Scale Construction

A series of field tests was conducted over a 2-year period. During this period the number of items was reduced from 130 to 90, and 10 scales measuring clusters of metacognitive approaches, learning strategies, self-regulation strategies, study skills, attitudes, motivation, and beliefs were developed. These clusters were identified by groups of experts and refined using psychometric data, such as Coefficient Alpha, for each potential scale. In addition, preliminary norms were developed using the Fall 1982 incoming freshman class at a small private college in the eastern United States. This college was identified by the U.S. Department

of Education as having a nationally representative student body. A total of 850 students participated, with complete data available for 780 students.

The scales were refined and 30 new items were created and added prior to another large-scale field test in 1984. Item analysis data were used to create the 77-item form of the LASSI. Norms were developed using a sample of 880 incoming freshman from a large southern university. Test-retest correlations (3-week intervals) were computed on a sample of 209 students from an introductory course in communications at the same school.

A number of different approaches were used to examine the validity of the LASSI. First, the scale scores were compared, where possible, to other tests or subscales measuring similar factors. Second, several of the scales were validated against performance measures. Finally, the LASSI was subjected to repeated tests of user validity. Professors, advisors, developmental educators, counselors, tutors, and learning center specialists at more than 30 colleges and universities used the LASSI on a trial basis. They reported few, if any, administration problems and a high degree of usefulness in their settings.

We have also examined the usefulness of the LASSI as part of our own work on the Cognitive Learning Strategies Project. It has been used repeatedly in an undergraduate course in learning-to-learn that is a part of our real-world laboratory. This course is designed to help academically underprepared and educationally disadvantaged students who are either experiencing, or are predicted to experience, academic problems while attending college. Approximately 1,000 students per year enroll. This 3-credit elective course is taught in sections of about 30 each. The LASSI has been used to help diagnose individual student problems, to direct both remediation and enrichment activities, and to evaluate student progress and course components.

PART 6: THE DEVELOPMENT OF THE LASSI, 2ND EDITION

The developmental work that led to the creation of the LASSI, 2nd Edition, (2002) began in 1997as part of the Cognitive Learning Strategies Project at the University of Texas at Austin. The LASSI, 2nd Edition, was developed to:

1. Update the LASSI and remove dated items, such as Item #72, "Often when studying I seem to get lost in details and 'can't see the forest for the trees'." The expression, "… can't see the forest for the trees," was commonly used in the 1980's when the LASSI was developed but is no longer familiar to many college students.

2. Incorporate then-current research findings in the areas of cognitive educational psychology, developmental education, higher education, instructional psychology and the psychology of learning. For example, a greater emphasis was placed on the metacognitive concepts of awareness, reflection and self-regulation.

3. Incorporate changes in educational practice and instruction in higher education. For example, the Study Aids scale was updated to reflect students' use of Web sites associated with their textbooks or courses.

4. Broaden the scope of some of the scales to increase the degree to which they sample the underlying domains. For example, the Concentration Scale samples more broadly from the domain of academic tasks required of a college student.

5. Create equal numbers of items for each scale. The Selecting Main Ideas Scale on the original LASSI contained only five items. The changes made each of the ten scales contain eight items.

6. Improve further the psychometric properties of the LASSI. For example, the lowest Coefficient Alpha for any scale on the LASSI, 2nd Edition, became .73, and all but two scales were above .80.

7. Create national norms based on a more broad-based sample. The sample was drawn from twelve different institutions representing different geographical regions as well as university, community college, state college and technical institutions.

Early Developmental Activities

The initial task in this project consisted of a series of interviews with professionals in both developmental education and educational psychology who either worked with or conducted research about students who were at-risk, or predicted to be at-risk, for academic failure or low performance in higher education settings, broadly defined. The data from these interviews helped us identify criteria for the improvement of the LASSI, 1st Edition. In addition, feed-back was also solicited from educational psychometricians with expertise in diagnostic/prescriptive assessments. Finally, a review of relevant research, related textbooks, and other learning assistance materials and Web sites was conducted.

Development of an Item Pool

Using the data gathered during the early development activities, an initial item pool was created. This initial pool of 134 items consisted of 77 items drawn from the 1st edition of the LASSI and 57 items created for the 2nd edition to address the seven developmental goals listed above in the introduction to this section. This pool of items was then examined by a team of developmental educators and educational psychologists, and, as a result of their input, a number of modifications were made: the wording of some of the items was changed, several items were deleted and new items were created to replace the discarded ones. After a second review, the items were randomly sorted to create a pilot test version of the instrument.

Pilot Testing

The pilot test was administered to 2,400 entering students at a major university in the south-western part of the United States. Students' Scholastic Aptitude Test (SAT) scores, if available, were also collected from these students in both the fall and spring semesters of 1998 and 1999. Based on an analysis of the students' LASSI item pool data set and its psychometric properties (including item/scale characteristics) and relation to other student data such as their

SAT scores, grade-point averages, and high school rank, a number of changes were made. For example, some items were eliminated, some were modified, and work began on the development of additional items to strengthen further the scale definitions and psychometric properties.

A team of developmental educators, educational psychologists and educational psychometricians examined this new pool of 166 items (77 items from the LASSI, 1st Edition, 29 items from the pilot test version of the LASSI, 2nd Edition, and 60 new items written for the field test of the LASSI, 2nd Edition). After relatively minor wording revisions, a series of pilot tests were conducted with five groups of college students to examine the item characteristics and interpretation by students. This student feedback was the final step in preparing for the broad-based field test and norm development.

Field Testing and Norm Development

The field test and norming version of the LASSI, 2nd Edition, contained extra items for each scale (only 80 of the 166 items field tested were needed for the final instrument). The field test/norming version was administered to 1,092 students from twelve different institutions representing different geographical regions as well as university, community college, state college and technical institutions. See Appendix A in the LASSI, 2nd Edition, Manual for a summary of the sample size by institution breakdown, breakdowns of the sample according to age, ethnicity, gender, and GPA, as well as the breakdowns across these categories.

Balancing both conceptual and psychometric analyses, ten scales of eight items each were developed using those items that best represented the breadth and depth of the conception underlying each scale and that provided the strongest psychometric properties for the scale. Summaries of the item statistics for each of the LASSI, 2nd Edition, scales can be found in Appendix B, Tables 14-23 of the manual for the LASSI, 2nd Edition. Appendix C, Table 24 in that manual also presents scale statistics (mean, standard deviation and Coefficient Alpha) for each of the 10 scales. Appendix D, Table 25 lists the inter-scale correlations for all scales and Appendix E, Table 26 contains a listing of the norms for the LASSI, 2nd Edition. Again, all of these tables are in the User's Manual for the LASSI, 2nd Edition.

PART 7: THE DEVELOPMENT OF THE LASSI, 3RD EDITION

Since the publication of the LASSI, 2nd Edition, in 2002, we have been gathering feedback from users, data from students, and research published on strategic and self-regulated learning theory and practice to help inform the development of the LASSI, 3rd Edition. Based on the information we gathered, analyzed, and synthesized, the LASSI, 3rd Edition, was developed to:

1. Reduce the length and time it takes to complete the LASSI while maintaining high standards for psychometric quality. The LASSI, 2nd Edition, was 80 items in length with 8 items per scale, and it took students approximately 15-20 minutes to complete and self-score the paper-and-pencil version. The LASSI, 3rd Edition, is 60 items in length with 6 items per scale, and it takes students approximately 9-11 minutes to complete the online version.

2. Maintain high standards of psychometric quality. The lowest Cronbach's alpha reliability coefficient on the LASSI, 3rd Edition, is now .76 (it was .73 on the LASSI, 2nd Edition), and all but four scales are .80 or above.

3. Incorporate current research findings in the areas of educational psychology, developmental education, higher education, and instructional psychology as well as research published directly on the LASSI, 2nd Edition. The development of the Using Academic Resources Scale (UAR) to replace the Study Aids Scale (STA) was largely in response to changes in the research base. Over the past 14 years, there have been major developments in the study of students' academic help-seeking that the Study Aids scale of the LASSI, 2nd Edition, did not reflect. In practice, students' use of academic resources has also gained increased attention and the resources available to students have expanded and changed over time. The UAR scale was designed to reflect these developments in research and practice. In addition, the STA scale had the lowest reliability of the LASSI, 2nd Edition, scales. With two fewer items, the UAR scale that replaced the STA scale has a stronger Cronbach's alpha reliability coefficient (.76). We also modified the motivation scale to include an item on effort that is central to motivational constructs in contemporary research.

4. Improve minor wording issues with two items. Item #9 of the LASSI, 3rd Edition, was revised from the LASSI, 2nd Edition, version of this item to use the phrase "During class discussion…" as opposed to "During class discussions…" because we found that the singular form was more commonly used among students and instructors. Item #5 of the LASSI, 3rd Edition, was revised from the LASSI, 2nd Edition, version to use present tense instead of past tense.

5. Create national norms based on a broad-based sample of students that reflects today's postsecondary student body. Since the publication of the LASSI, 2nd Edition, the characteristics of students entering postsecondary education have changed to include higher percentages of nontraditionally-aged students, students of lower income, and students of underrepresented ethnic minorities. The LASSI, 3rd Edition, norms are based on a 2014 sample of 1,386 students. Students were recruited from 23 postsecondary institutions that had previously used the LASSI, 2nd Edition, and were asked to field test the LASSI, 3rd Edition. We strategically selected these institutions to represent different geographic regions as well as universities, 4-year colleges, 2-year colleges, adult education programs, and public and private institutions.

Early and Ongoing Developmental Activities

As part of our efforts to monitor and improve the quality of the LASSI, we have been continuously gathering, analyzing, and synthesizing information relevant to the LASSI. For example, we routinely monitor the LASSI in Action, a user-driven newsletter that allows professionals to share their experiences with the LASSI assessment. We also receive feedback from LASSI users and potential users via emails and phone calls that come directly to the senior author and publisher, and through face-to-face visits during conferences and professional development workshops. To keep up with general concerns of practitioners and trends across different fields focused on student support in higher education, we also monitor a number of listservs in the areas of developmental education, learning assistance, student affairs, and higher education. Moreover, we routinely review, and contribute to, the cutting-edge research that forms the basis of strategic and self-regulated learning theory and practice as well as research published directly on the LASSI. Our ongoing efforts to listen to feedback from

LASSI users and potential users and stay current with emerging research and practice have greatly informed the changes we have made to the LASSI 3rd Edition. These changes are described in the Summary of the Changes in the LASSI, 3rd Edition, in Part 1 of this Manual and are discussed in even more detail in the previous section.

Development of the Field Test Version of the LASSI, 3rd Edition

In order to investigate approaches for reducing the length of the LASSI, 2nd Edition, while maintaining its strong psychometric properties, we analyzed a dataset of 30,005 participants who took the LASSI, 2nd Edition. These analyses helped us identify items that could be removed from each LASSI scale without compromising its psychometric quality. We also based our decisions about removing items on the content of each item. Our goal was to maintain a representative sampling of items from the construct domain and keep items that were core to the construct being measured. Based on analyses of the data and item content, we identified six items from each LASSI, 2nd Edition, scale to retain for the Field Test Version of the LASSI, 3rd Edition, with the exception of the Study Aids Scale (STA) because we planned to replace STA with a new scale. We closely examined each of these items and identified two items for minor revisions, which are described in the beginning section of Part 7.

Based on our review of the literature, it was clear to us that we needed to replace the STA scale with a new scale that reflected current conceptualizations of help-seeking and developments in learning assistance. We developed 10 items for the Using Academic Resources Scale (UAR) to examine in the Field Test Version of the LASSI, 3rd Edition. Our goal was to reduce the UAR scale to six items based on the Field Test results, which we did.

To reflect recent developments in research on student motivation and represent a broader sampling of items from the construct domain of the Attitude (ATT) and Motivation (MOT) scales, we included three additional items on the Field Test Version of the LASSI, 3rd Edition. We included two new items for the ATT scale and one new item for the MOT scale. Of these three items, only the MOT item was used in the final version of the LASSI, 3rd Edition.
In total, the Field Test Version of the LASSI, 3rd Edition, included 67 items. Of these, 60 items were retained in the final version of the LASSI, 3rd Edition.

Field Testing and Norm Development

The Field Test Version of the LASSI, 3rd Edition, was administered online to 1,386 students at 23 different postsecondary institutions who were currently using the LASSI. Institutions were strategically selected to represent diverse geographic locations and types of institutions. See Appendix A, Tables 1-2 for a summary of the sample size by geographic location and institution type. See Appendix A, Tables 3-9 for a breakdown by students' age, gender, race/ethnicity, first time in college status, and current reason for enrolling in college courses.

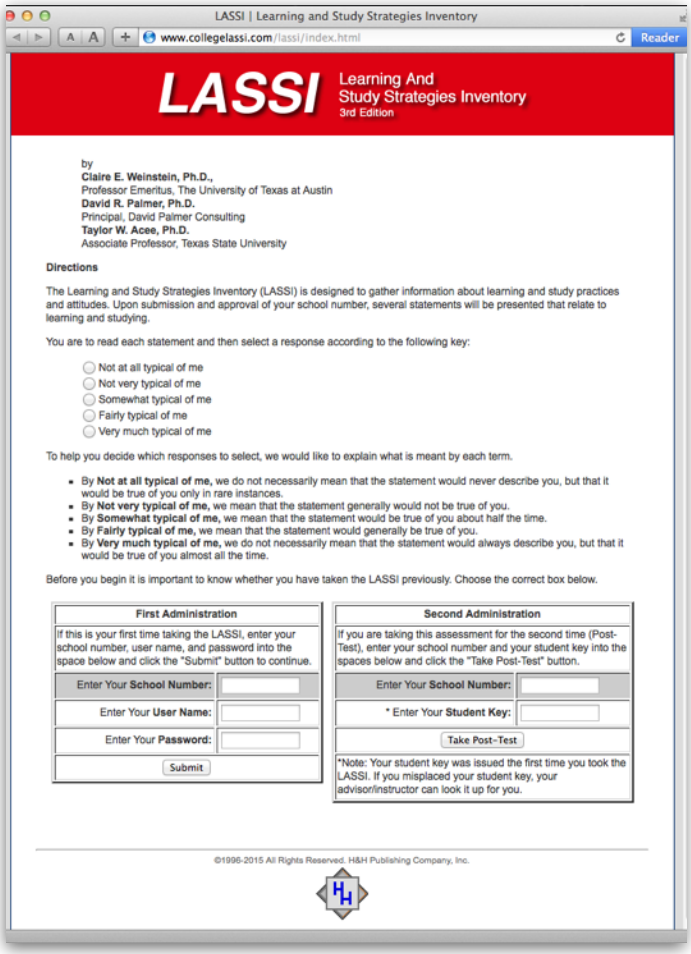
Balancing both conceptual and psychometric analyses, 10 scales of six items each were developed using items that best represented the breadth and depth of the conception underlying each scale and that provided the strongest psychometric properties for the scale. Summaries of the item statistics for each of the LASSI, 3rd Edition, scales can be found in Appendix B, Tables 10-19. Appendix C, Table 20 presents scale statistics (mean, standard deviation, and Coefficient Alpha) for each of the 10 scales. Appendix D, Table 21 lists the correlations among all scales. Appendix E, Table 22 contains a listing of the norms for the LASSI, 3rd Edition.

PART 8: ADMINISTERING THE WEB LASSI

This section will guide you through the process of administering the Web version of LASSI.

Administering the Web LASSI

Figure 1

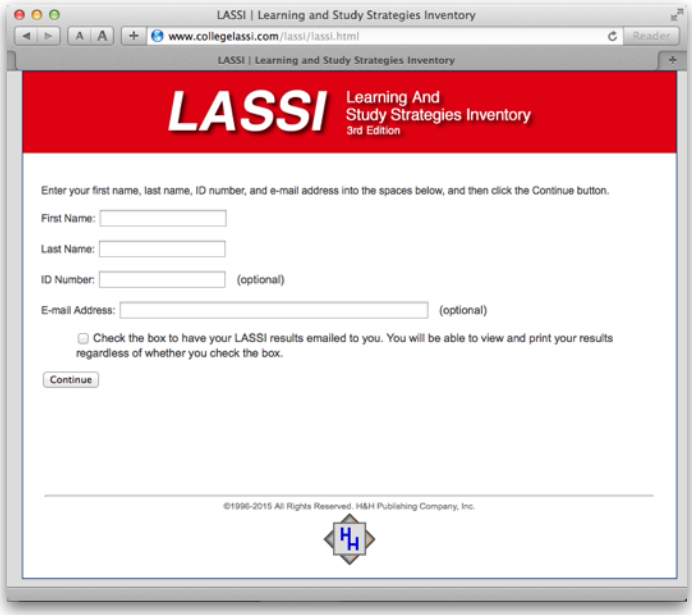


The Web LASSI is administered online and requires only an Internet connection and a web browser such as Internet Explorer, Chrome, Firefox, Safari, etc. There are no special plug-ins required. Upon placing an order for the Web LASSI, you will receive an email with attached PDF instructions. Page 2 of the PDF will contain specific instructions to the student. The instructions direct the student to an introductory page similar to Figure 1. If this is the first time taking the LASSI, enter the school number, user name, and password into the First Administration box and select the submit button to continue. If the student is returning to take a post-test, enter the school number and student key into the Second Administration box and select the "Take Post-Test" button to continue. The student key is unique for each student and is printed on the LASSI Profile Report each student receives at the conclusion of the pre-test. Administrators can also view a list of student keys at the Administrative Web Site. See below for instructions on accessing the Web LASSI Administrative Account.

First Administration

Upon entering a school number, user name, password and clicking the “Login” button, the student will be directed to a page similar to Figure 2. This page requires the student to enter a first and last name, ID Number, and email address. The ID Number field is optional. Click the “Continue” button to proceed.

Figure 2



Note: The ID Number field can be set to be required. Contact your LASSI support representative to request this option for your account.

Second Administration

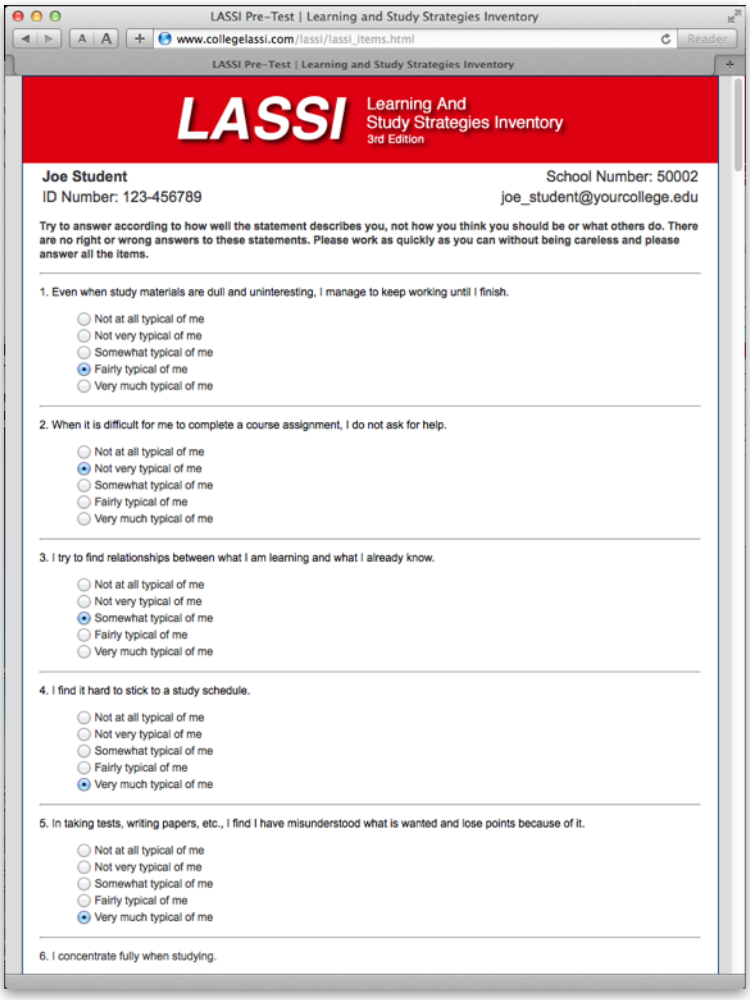
If the student enters a school number and a valid student key into the Second Administration box (Figure 1), the next screen to appear will be the post-test LASSI (Figure 3). Using the Second Administration login box will assure the student’s pre-test and post-test records are linked in the system.

LASSI Items

Figure 3

The next screen to appear (Figure 3) requires the student to read each statement carefully and click one of the five responses. To help students decide what is meant by each response, a summary is shown below.

- By **Not at all typical of me**, we do not necessarily mean that the statement would never describe you, but that it would be true of you only in rare instances.
- By **Not very typical of me**, we mean that the statement generally would not be true of you.
- By **Somewhat typical of me**, we mean that the statement would be true of you about half of the time.
- By **Fairly typical of me**, we mean that the statement would generally be true of you.
- By **Very much typical of me**, we do not necessarily mean that the statement would always describe you, but that it would be true of you almost all the time.

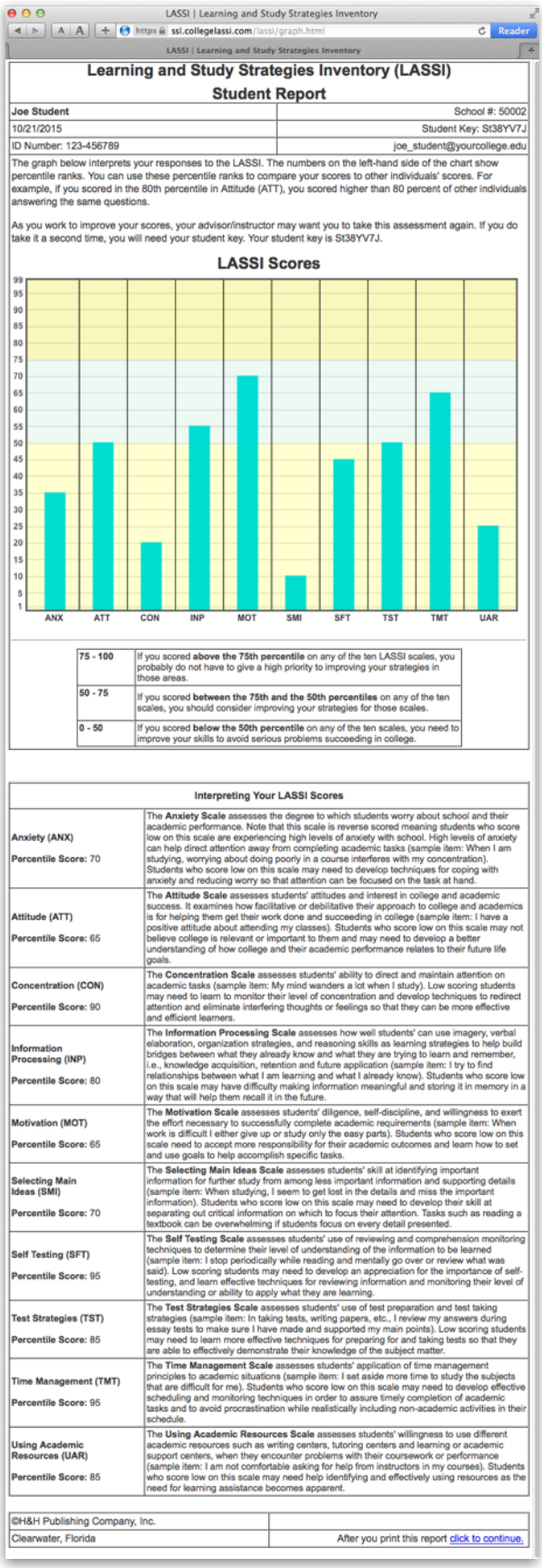


Although there is no time limit, it is estimated that it will take about 9-11 minutes to complete all items.

LASSI Student Profile

After completing all the items, a report will be displayed listing percentile scores for each of the ten LASSI scales. A sample Student Profile is shown in Figure 4.

Figure 4



LASSI | Learning and Study Strategies Inventory

ssl.collegelassi.com/lassi/graph.html

Learning and Study Strategies Inventory (LASSI)
Student Report

Joe Student	School #: 50002
10/21/2015	Student Key: St38YV7J
ID Number: 123-456789	joe_student@yourcollege.edu

The graph below interprets your responses to the LASSI. The numbers on the left-hand side of the chart show percentile ranks. You can use these percentile ranks to compare your scores to other individuals' scores. For example, if you scored in the 80th percentile in Attitude (ATT), you scored higher than 80 percent of other individuals answering the same questions.

As you work to improve your scores, your advisor/instructor may want you to take this assessment again. If you do take it a second time, you will need your student key. Your student key is St38YV7J.

LASSI Scores

75 - 100	If you scored **above the 75th 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.
50 - 75	If you scored **between the 75th and the 50th percentiles** on any of the ten scales, you should consider improving your strategies for those scales.
0 - 50	If you scored **below the 50th percentile** on any of the ten scales, you need to improve your skills to avoid serious problems succeeding in college.

Interpreting Your LASSI Scores

Anxiety (ANX) **Percentile Score:** 70	The **Anxiety Scale** assesses the degree to which students worry about school and their academic performance. Note that this scale is reverse scored meaning students who score low on this scale are experiencing high levels of anxiety with school. High levels of anxiety can help direct attention away from completing academic tasks (sample item: When I am studying, worrying about doing poorly in a course interferes with my concentration). Students who score low on this scale may need to develop techniques for coping with anxiety and reducing worry so that attention can be focused on the task at hand.
Attitude (ATT) **Percentile Score:** 65	The **Attitude Scale** assesses students' attitudes and interest in college and academic success. It examines how facilitative or debilitative their approach to college and academics is for helping them get their work done and succeeding in college (sample item: I have a positive attitude about attending my classes). Students who score low on this scale may not believe college is relevant or important to them and may need to develop a better understanding of how college and their academic performance relates to their future life goals.
Concentration (CON) **Percentile Score:** 90	The **Concentration Scale** assesses students' ability to direct and maintain attention on academic tasks (sample item: My mind wanders a lot when I study). Low scoring students may need to learn to monitor their level of concentration and develop techniques to redirect attention and eliminate interfering thoughts or feelings so that they can be more effective and efficient learners.
Information Processing (INP) **Percentile Score:** 80	The **Information Processing Scale** assesses how well students' can use imagery, verbal elaboration, organization strategies, and reasoning skills as learning strategies to help build bridges between what they already know and what they are trying to learn and remember, i.e., knowledge acquisition, retention and future application (sample item: I try to find relationships between what I am learning and what I already know). Students who score low on this scale may have difficulty making information meaningful and storing it in memory in a way that will help them recall it in the future.
Motivation (MOT) **Percentile Score:** 65	The **Motivation Scale** assesses students' diligence, self-discipline, and willingness to exert the effort necessary to successfully complete academic requirements (sample item: When work is difficult I either give up or study only the easy parts). Students who score low on this scale need to accept more responsibility for their academic outcomes and learn how to set and use goals to help accomplish specific tasks.
Selecting Main Ideas (SMI) **Percentile Score:** 70	The **Selecting Main Ideas Scale** assesses students' skill at identifying important information for further study from among less important information and supporting details (sample item: When studying, I seem to get lost in the details and miss the important information). Students who score low on this scale may need to develop their skill at separating out critical information on which to focus their attention. Tasks such as reading a textbook can be overwhelming if students focus on every detail presented.
Self Testing (SFT) **Percentile Score:** 95	The **Self Testing Scale** assesses students' use of reviewing and comprehension monitoring techniques to determine their level of understanding of the information to be learned (sample item: I stop periodically while reading and mentally go over or review what was said). Low scoring students may need to develop an appreciation for the importance of self-testing, and learn effective techniques for reviewing information and monitoring their level of understanding or ability to apply what they are learning.
Test Strategies (TST) **Percentile Score:** 85	The **Test Strategies Scale** assesses students' use of test preparation and test taking strategies (sample item: In taking tests, writing papers, etc., I review my answers during essay tests to make sure I have made and supported my main points). Low scoring students may need to learn more effective techniques for preparing for and taking tests so that they are able to effectively demonstrate their knowledge of the subject matter.
Time Management (TMT) **Percentile Score:** 95	The **Time Management Scale** assesses students' application of time management principles to academic situations (sample item: I set aside more time to study the subjects that are difficult for me). Students who score low on this scale may need to develop effective scheduling and monitoring techniques in order to assure timely completion of academic tasks and to avoid procrastination while realistically including non-academic activities in their schedule.
Using Academic Resources (UAR) **Percentile Score:** 85	The **Using Academic Resources Scale** assesses students' willingness to use different academic resources such as writing centers, tutoring centers and learning or academic support centers, when they encounter problems with their coursework or performance (sample item: I am not comfortable asking for help from instructors in my courses). Students who score low on this scale may need help identifying and effectively using resources as the need for learning assistance becomes apparent.

After you print this report click to continue.

Web LASSI Administrative Account

Administrators of the Web LASSI can view previously administered results, download raw data, and review the status of their institution's account by locating the URL provided on the Administrator Instruction Sheet. The Administrator Instruction Sheet is located on Page 3 of the PDF that is emailed to the administrator overseeing the Web LASSI account. Do not copy the Administrator Instruction Sheet and pass it out to your students. Some of the information on the sheet is meant only for the administrator.

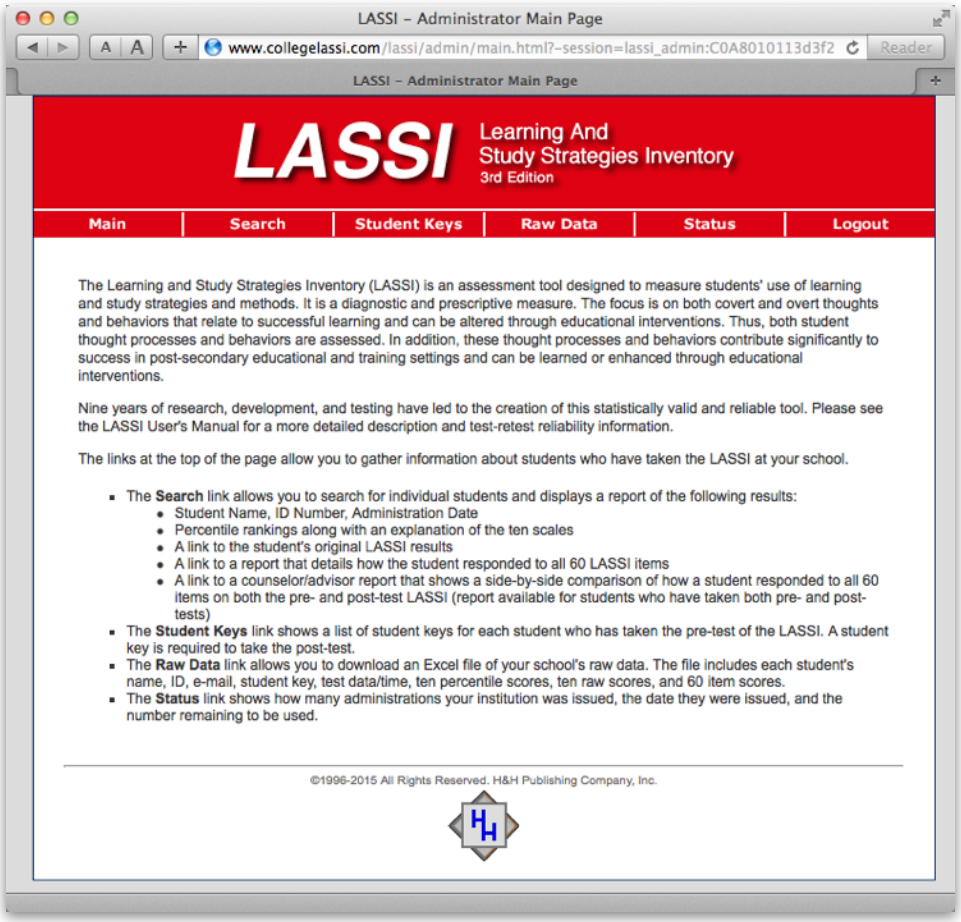
The following information is available to administrators through the Administrative Web Site:

- The **Search** link allows you to search for individual students and displays a report of the following results:
    - Student Name, ID Number, Administration Date
    - Percentile rankings along with an explanation of the ten scales
    - A link to the student's original LASSI results
    - A link to a report that details how the student responded to all LASSI items
    - A link to a counselor/advisor report that shows a side-by-side comparison of how a student responded to all items on both the pre- and post-test LASSI (for students who have taken both pre- and post-tests)
- The **Student Keys** link shows a list of student keys for each student who has taken the pre-test of the LASSI. A student key is required to take the post-test.
- The **Raw Data** link allows you to download an Excel file of your school's raw data. The file includes each student's name, ID, email, student key, test date/time, ten percentile scores, ten raw scores, and item scores.
- The **Status** link shows how many administrations your institution was issued, the date they were issued, and the number remaining to be used.

Home Page

Figure 5

The home page of the LASSI Administrator Site is shown in Figure 5. Navigate the site using the buttons at the top of the page.



Search Records

Figure 6

The page to the right (Figure 6) appears after selecting the “Search” tab. Click “Search Records” without entering any search parameters to find a list of all students in your account. Use the fields to refine your search and return fewer records.

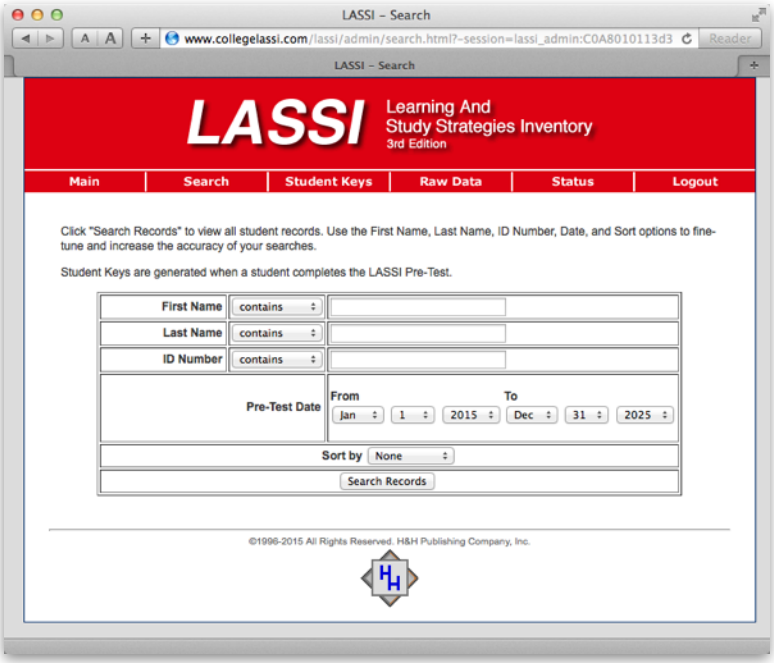


Figure 7

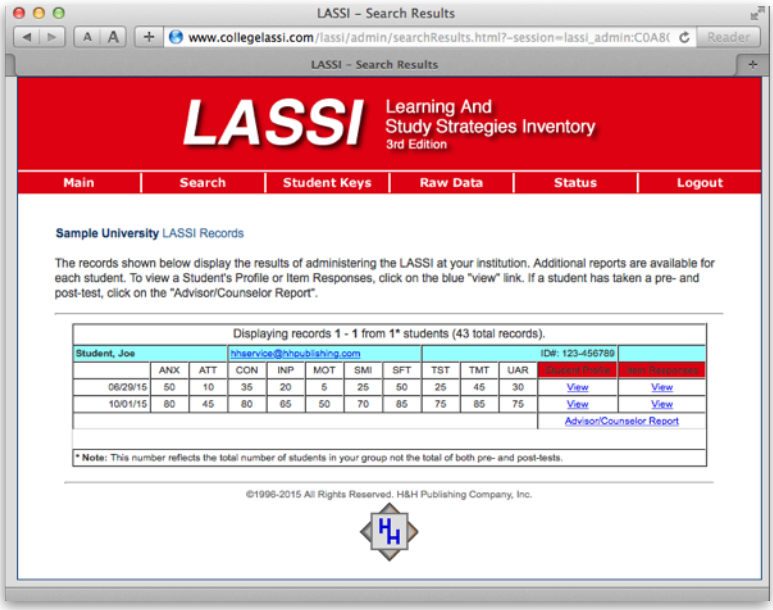
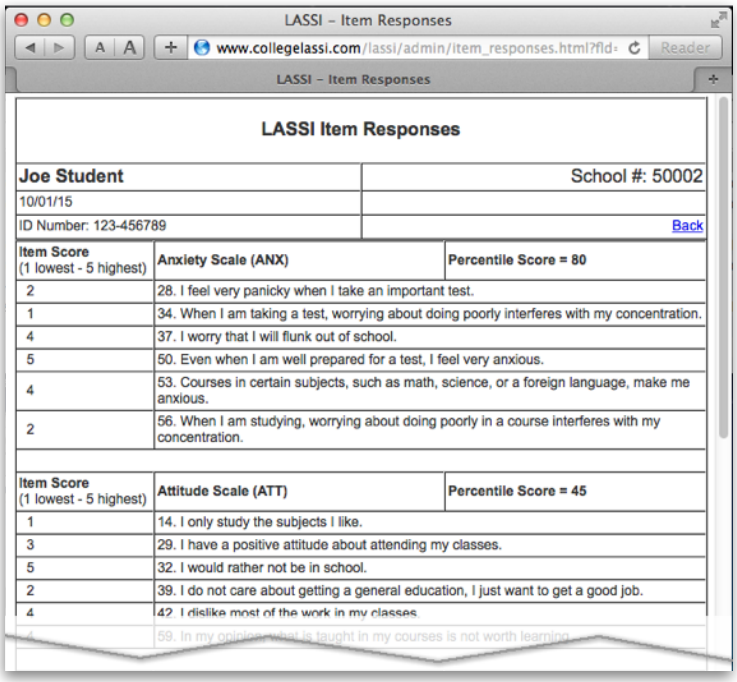


Figure 7 shows the results of a search query. Both pre- and post-test results are shown in the figure. To view a Profile Report or Item Responses Report, click the “View” link. A Profile Report is similar to Figure 4.

Item Response Report

Figure 8

A sample Item Responses Report is shown in Figure 8. The Item Responses report groups the LASSI items by scale. All the items that make up the ten scales along with how the student responded to each are shown. A score of 1 is least desirable while a 5 is the most desirable. This report can be a valuable resource for counselors and academic advisors.



LASSI – Item Responses

www.collegelassi.com/lassi/admin/item_responses.html?fld=

LASSI – Item Responses

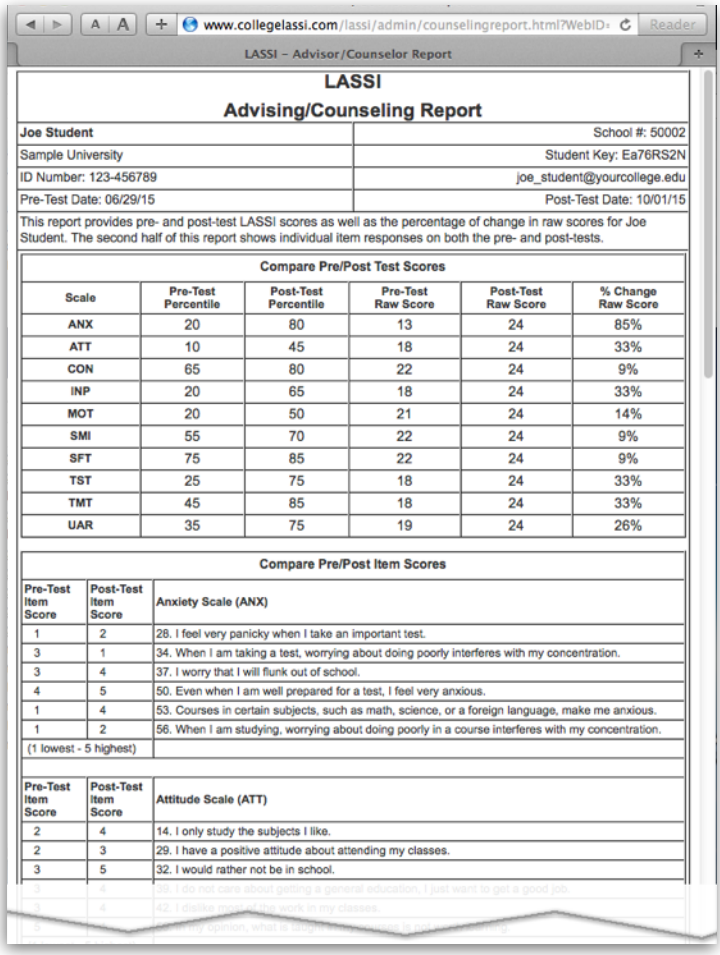
LASSI Item Responses

Joe Student	School #: 50002
10/01/15	
ID Number: 123-456789	Back

Item Score (1 lowest - 5 highest)	Anxiety Scale (ANX)	Percentile Score = 80
2	28. I feel very panicky when I take an important test.	
1	34. When I am taking a test, worrying about doing poorly interferes with my concentration.	
4	37. I worry that I will flunk out of school.	
5	50. Even when I am well prepared for a test, I feel very anxious.	
4	53. Courses in certain subjects, such as math, science, or a foreign language, make me anxious.	
2	56. When I am studying, worrying about doing poorly in a course interferes with my concentration.	

Item Score (1 lowest - 5 highest)	Attitude Scale (ATT)	Percentile Score = 45
1	14. I only study the subjects I like.	
3	29. I have a positive attitude about attending my classes.	
5	32. I would rather not be in school.	
2	39. I do not care about getting a general education, I just want to get a good job.	
4	42. I dislike most of the work in my classes.	
4	59. In my opinion, what is taught in my courses is not worth learning.	

Figure 9



www.collegelassi.com/lassi/admin/counselingreport.html?WebID=

LASSI – Advisor/Counselor Report

LASSI

Advising/Counseling Report

Joe Student	School #: 50002
Sample University	Student Key: Ea76RS2N
ID Number: 123-456789	joe_student@yourcollege.edu
Pre-Test Date: 06/29/15	Post-Test Date: 10/01/15

This report provides pre- and post-test LASSI scores as well as the percentage of change in raw scores for Joe Student. The second half of this report shows individual item responses on both the pre- and post-tests.

Compare Pre/Post Test Scores

Scale	Pre-Test Percentile	Post-Test Percentile	Pre-Test Raw Score	Post-Test Raw Score	% Change Raw Score
ANX	20	80	13	24	85%
ATT	10	45	18	24	33%
CON	65	80	22	24	9%
INP	20	65	18	24	33%
MOT	20	50	21	24	14%
SMI	55	70	22	24	9%
SFT	75	85	22	24	9%
TST	25	75	18	24	33%
TMT	45	85	18	24	33%
UAR	35	75	19	24	26%

Compare Pre/Post Item Scores

Pre-Test Item Score	Post-Test Item Score	Anxiety Scale (ANX)
1	2	28. I feel very panicky when I take an important test.
3	1	34. When I am taking a test, worrying about doing poorly interferes with my concentration.
3	4	37. I worry that I will flunk out of school.
4	5	50. Even when I am well prepared for a test, I feel very anxious.
1	4	53. Courses in certain subjects, such as math, science, or a foreign language, make me anxious.
1	2	56. When I am studying, worrying about doing poorly in a course interferes with my concentration.
(1 lowest - 5 highest)		

Pre-Test Item Score	Post-Test Item Score	Attitude Scale (ATT)
2	4	14. I only study the subjects I like.
2	3	29. I have a positive attitude about attending my classes.
3	5	32. I would rather not be in school.

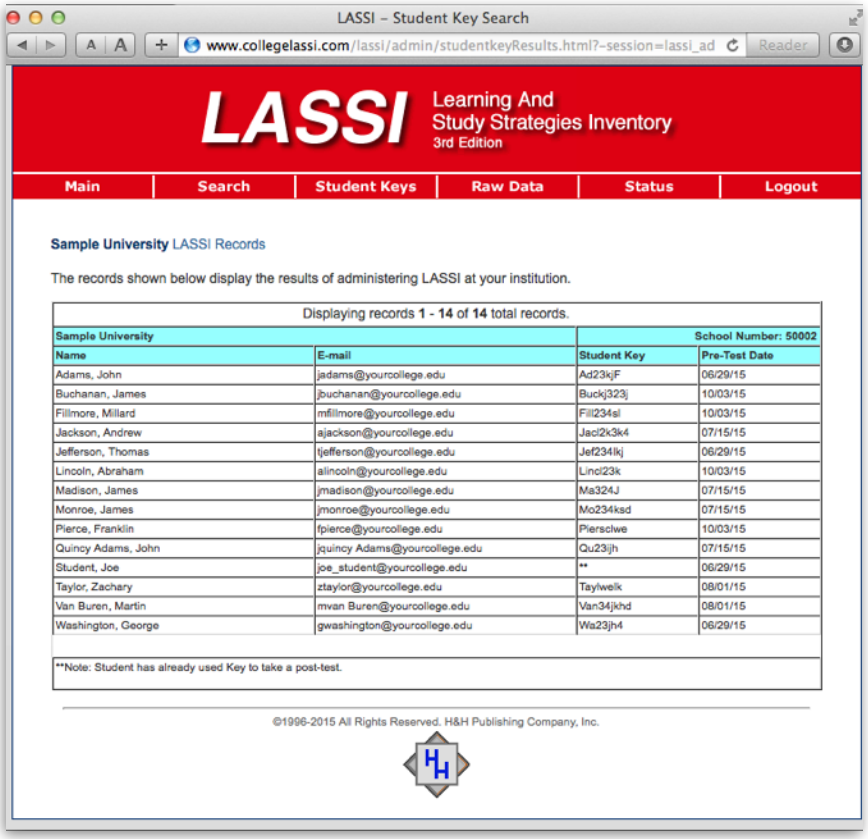
Advisor/Counselor Report

An "Advisor/Counselor Report" is shown in Figure 9. This report displays ten percentiles, 10 raw scales scores and the percentage change in raw score from pre- to post-test. Responses for both pre- and post-test are also shown.

Student Keys

Figure 10

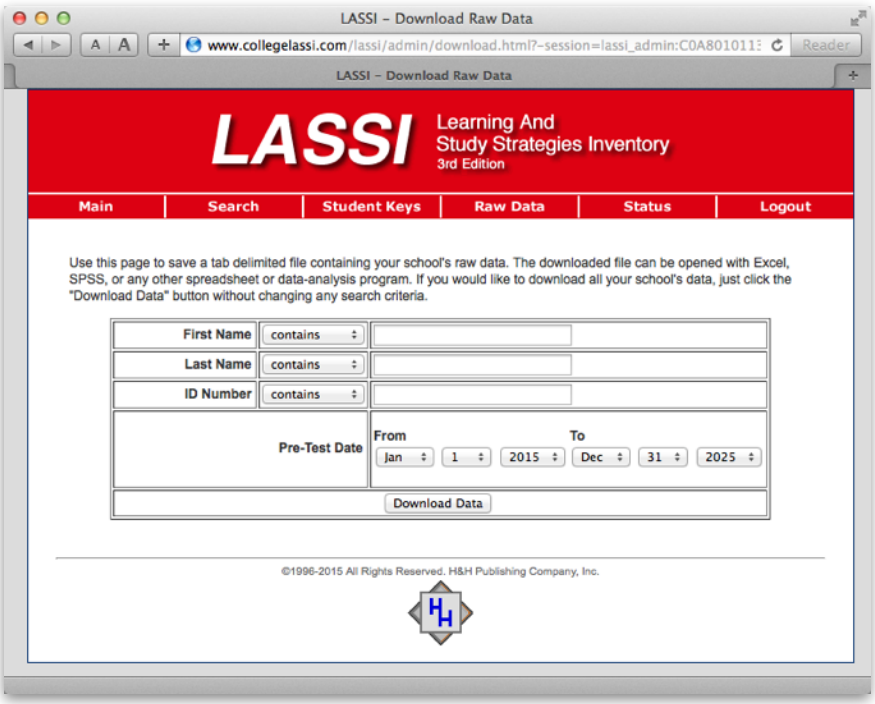
The page to the right (Figure 10) appears after selecting the “Student Keys” button. Student Keys are unique and generated upon completion of a pre-test. Students will use a Student Key along with a School Number to take a post-test. (See Second Administration box in Figure 1). While Student Keys are included on each student’s LASSI Profile Report (Figure 4), you may find it helpful to have a list available for students who may not have their key immediately available.



Raw Data

Figure 11

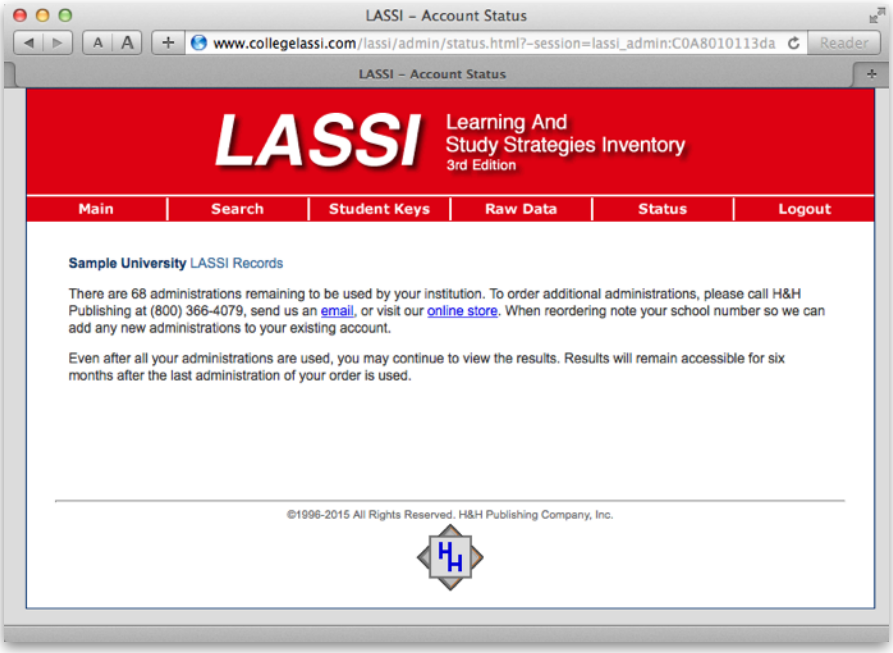
The Raw Data link allows you to download a file of your school's raw data (Figure 11). The file includes each student's name, ID, email, student key, test date/time, ten percentile scores, ten raw scores, and 60 item scores. The file can be opened with Excel, SPSS, or any other spreadsheet or data-analysis program.



Account Status

Figure 12

The page to the right (Figure 12) appears after selecting the “Status” button. The account status relates the number of administrations remaining in your account. Unused administrations do not expire. When reordering, note your school number so we can add new administrations to your existing account.



Appendix A: Descriptions of the Field Test and Norming Sample (Tables 1-9)

Table 1: Sample Size by Type of Institution

	Number of Institutions			Number of Students		
	Public	Private	Total	Public	Private	Total
Community College or Junior College	7	0	7	518	0	518
4-Year College	1	4	5	1	257	258
4-Year University	7	3	10	389	178	567
Adult Education Program	1	0	1	43	0	43
Grand Total	16	7	23	951	435	1386

Table 2: Sample Size by Geographic Location

	Number of Institutions				Number of Students			
	Urban	Suburban	Rural	Total	Urban	Suburban	Rural	Total
New England	0	1	0	1	0	34	0	34
Mid-Atlantic	0	1	1	2	0	1	48	49
East North Central	3	1	0	4	232	17	0	249
West North Central	1	0	2	3	29	0	140	169
South Atlantic	1	4	0	5	99	251	0	350
East South Central	0	2	0	2	0	201	0	201
West South Central	1	0	0	1	99	0	0	99
Mountain	1	0	1	2	20	0	52	72
Pacific	2	0	0	2	127	0	0	127
Nova Scotia, Canada	0	1	0	1	0	36	0	36
Grand Total	9	10	4	23	606	540	240	1386

Table 3: Race/Ethnicity by Gender			
Race/Ethnicity	Female	Male	Total
American Indian or Alaska Native	8	2	10
Asian	35	17	52
Black or African American	173	142	315
Hispanic or Latino	125	79	204
Native Hawaiian or Other Pacific Islander	2	3	5
White or Caucasian	408	341	749
Other	23	28	51
Grand Total	774	612	1,386

Table 4: Age by Gender			
Age	Female	Male	Total
17 or Younger	18	9	27
18-19	376	361	737
20-21	135	103	238
22-23	53	42	95
24-25	32	20	52
26 or Older	160	77	237
Total	774	612	1,386

Table 5: Race/Ethnicity by Age							
Race/Ethnicity	17 or Younger	18-19	20-21	22-23	24-25	26 or Older	Total
American Indian or Alaska Native	0	6	1	2	0	1	10
Asian	4	16	11	6	2	13	52
Black or African American	6	164	55	31	12	47	315
Hispanic or Latino	3	127	23	9	5	37	204
Native Hawaiian or Other Pacific Islander	0	4	0	0	0	1	5
White or Caucasian	12	399	135	47	30	126	749
Other	2	21	13	0	3	12	51
Total	27	737	238	95	52	237	1,386

Table 6: Ethnicity by Age – Males							
Race/Ethnicity	17 or Younger	18-19	20-21	22-23	24-25	26 or Older	Total
American Indian or Alaska Native	0	2	0	0	0	0	2
Asian	0	8	3	3	1	2	17
Black or African American	4	73	27	20	6	12	142
Hispanic or Latino	0	51	8	4	1	15	79
Native Hawaiian or Other Pacific Islander	0	2	0	0	0	1	3
White or Caucasian	4	213	57	15	10	42	341
Other	1	12	8	0	2	5	28
Total	9	361	103	42	20	77	612

Table 7: Ethnicity by Age – Females							
Race/Ethnicity	17 or Younger	18-19	20-21	22-23	24-25	26 or Older	Total
American Indian or Alaska Native	0	4	1	2	0	1	8
Asian	4	8	8	3	1	11	35
Black or African American	2	91	28	11	6	35	173
Hispanic or Latino	3	76	15	5	4	22	125
Native Hawaiian or Other Pacific Islander	0	2	0	0	0	0	2
White or Caucasian	8	186	78	32	20	84	408
Other	1	9	5	0	1	7	23
Total	18	376	135	53	32	160	774

Table 8: First Time in College Status	
	Total
Previously Enrolled in College	566
First Time in College	820
Total	1,386

Table 9: Current Reason for Enrolling in College Courses	
	Total
1- or 2-Year Certificate	95
2-Year Associates Degree	183
4-Year Degree	737
Transfer to a 4-Year College or University	246
Other	125
Total	1,386

Appendix B: Summaries of the Item Statistics for Each LASSI, 3rd Edition Scale (Tables 10-19)

Table 10: Item Statistics for the Anxiety Scale (Coefficient Alpha = .87)

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
28	2.576	1.314	0.754	0.827
34	2.908	1.275	0.759	0.826
37	3.672	1.433	0.511	0.873
50	2.495	1.297	0.693	0.838
53	2.950	1.283	0.556	0.861
56	3.152	1.204	0.729	0.833

Table 11: Item Statistics for the Attitude Scale (Coefficient Alpha = .76)

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
14	3.759	1.078	0.371	0.762
29	4.009	0.939	0.462	0.738
32	4.019	1.195	0.571	0.708
39	4.023	1.110	0.524	0.721
42	3.682	0.977	0.601	0.703
59	4.208	0.925	0.514	0.726

Table 12: Item Statistics for the Concentration Scale (Coefficient Alpha = .85)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
6	3.287	1.007	0.611	0.829
13	3.163	1.087	0.695	0.812
25	2.592	1.170	0.693	0.812
40	3.336	1.108	0.612	0.828
47	3.113	1.150	0.708	0.809
58	3.716	0.956	0.475	0.851

Table 13: Item Statistics for the Information Processing Scale (Coefficient Alpha = .81)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
3	3.989	0.893	0.564	0.784
10	3.211	1.033	0.494	0.799
18	3.720	0.943	0.622	0.771
22	3.701	1.004	0.457	0.806
35	3.400	1.100	0.612	0.772
41	3.553	1.042	0.695	0.752

Table 14: Item Statistics for the Motivation Scale (Coefficient Alpha = .77)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
1	3.554	0.993	0.523	0.739
17	3.849	1.016	0.509	0.743
24	3.924	0.967	0.616	0.715
31	4.031	0.884	0.601	0.722
33	4.076	0.997	0.429	0.763
45	4.202	0.969	0.450	0.757

Table 15: Item Statistics for the Selecting Main Ideas Scale (Coefficient Alpha = .86)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
9	3.508	1.162	0.629	0.846
16	3.425	1.091	0.712	0.830
19	3.395	1.077	0.694	0.833
44	3.343	1.086	0.631	0.845
48	3.483	1.075	0.703	0.832
55	3.519	0.988	0.573	0.854

Table 16: Item Statistics for the Self Testing Scale (Coefficient Alpha = .80)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
15	2.820	1.257	0.544	0.778
20	2.888	1.215	0.586	0.767
26	3.376	1.069	0.440	0.798
38	2.970	1.180	0.602	0.763
49	2.639	1.189	0.622	0.758
52	3.334	1.091	0.571	0.771

Table 17: Item Statistics for the Test Strategies Scale (Coefficient Alpha = .77)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
5	3.367	1.073	0.546	0.720
21	3.398	1.015	0.544	0.721
30	3.253	1.075	0.599	0.705
36	3.452	1.018	0.588	0.710
43	3.781	1.032	0.231	0.797
57	3.512	1.091	0.557	0.717

Table 18: Item Statistics for the Time Management Scale (Coefficient Alpha = .80)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
4	2.985	1.182	0.593	0.762
8	3.102	1.164	0.473	0.790
11	2.543	1.217	0.659	0.746
23	2.742	1.207	0.705	0.734
51	3.500	1.094	0.456	0.793
54	3.138	1.103	0.461	0.792

Table 19: Item Statistics for the Using Academic Resources Scale (Coefficient Alpha = .76)				
Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Coefficient Alpha Excluding This Item
2	3.429	1.141	0.560	0.716
7	3.683	1.145	0.493	0.733
12	2.913	1.293	0.535	0.721
27	3.566	1.230	0.483	0.735
46	3.198	1.288	0.617	0.697
60	3.388	1.139	0.351	0.766

Appendix C: Individual Scale Statistics (Table 20)

Table 20: Scale Statistics for the Final Version of Each Scale			
Scale Name	Scale Mean	Standard Deviation	Coefficient Alpha
Anxiety	17.753	6.048	0.866
Attitude	23.701	4.223	0.762
Concentration	19.207	4.905	0.849
Information Processing	21.576	4.323	0.811
Motivation	23.636	3.994	0.774
Selecting Main Ideas	20.673	4.997	0.863
Self Testing	18.027	4.980	0.804
Test Strategies	20.761	4.276	0.765
Time Management	18.011	4.939	0.802
Using Academic Resources	20.175	4.907	0.764

Appendix D: Correlations Among LASSI Scales (Table 21)

Table 21: Scale Intercorrelations										
	Anxiety ANX	Attitude ATT	Concentration CON	Information Processing INP	Motivation MOT	Selecting Main Idea SMI	Self Testing SFT	Test Strategies TST	Time Management TST	Using Academic Resources UAR
Anxiety	1									
Attitude	0.199	1								
Concentration	0.374	0.508	1							
Information Processing	0.125	0.303	0.312	1						
Motivation	0.205	0.577	0.612	0.380	1					
Selecting Main Ideas	0.550	0.327	0.568	0.297	0.406	1				
Self Testing	0.027	0.324	0.445	0.504	0.427	0.250	1			
Test Strategies	0.624	0.379	0.578	0.282	0.482	0.743	0.245	1		
Time Management	0.204	0.433	0.691	0.331	0.586	0.365	0.552	0.433	1	
Using Academic Resources	0.128	0.423	0.383	0.301	0.426	0.197	0.406	0.259	0.453	1

Appendix E: LASSI, 3rd Edition Scale Norms (Table 22)

Table 22: National Norms for the LASSI, 3rd Edition

Percentile Score	Anxiety ANX	Attitude ATT	Concentration CON	Information Processing INP	Motivation MOT	Selecting Main Ideas SMI	Self Testing SFT	Test Strategies TST	Time Management TMT	Using Academic Resources UAR	Percentile Score
99	30	30	30	30	30	30	30	30	30	30	99
95	28		28	29		29	27	28	27	29	95
90	26	29	26	28	29	27	25	27	25	27	90
85	25		25	27	28	26	24	26	24	26	85
80	24	28	24	26		25	23	25	23	25	80
75	23	27	23	25	27		22	24	22	24	75
70	22					24	21		21	23	70
65	21	26	22	24	26		20	23			65
60	20		21	23	25	23			20	22	60
55	19	25				22	19	22	19	21	55
50	18		20	22	24		18	21			50
45		24	19	21		21			18	20	45
40	17				23	20	17	20	17		40
35	16	23	18	20			16		16	19	35
30	15	22	17		22	19		19		18	30
25	14		16	19		18	15	18	15	17	25
20	13	21	15	18	21	17	14		14		20
15	11	20	14	17	20	16	13	17	13	16	15
10	10	18	13		19	14	12	16	12	14	10
5	8	16	11	15	17	12	10	14	11	12	5
1	6	13	8	12	13	8	8	11	8	8	1

— LASSI —

Learning and Study Strategies Inventory
3rd Edition

by

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