

LASSI IN ACTION

LASSI-in-Action provides research and case studies from professionals using LASSI, LASSI Instructional Modules, and LASSI Prescriptions.

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Letter from the Publisher

Welcome to LASSI in Action! As always this edition provides you with information on what others are doing as we seek a successful academic year for your students.

This edition contains helpful articles on LASSI while including new information on its accompanying materials: LASSI PLUS and LASSI Instructional Modules. Interestingly, one of the articles is a video-supported presentation that explains how to interpret LASSI results for its ten scales.

We have had so many offers from colleagues for authoring articles that another edition of LASSI in Action will be available soon.

Click on a title in the Contents bar to begin reading each article.

The Power of the LASSI as a Teaching and Learning Tool

by Kimran Buckholz, PhD, Department of Biology, University of New Mexico

One of the Biology courses I teach at the University of New Mexico (UNM) is an introductory course geared towards health science majors. When I began teaching 15+ years ago, I delivered my lectures in a pretty standard way. Fortunately, in a professional development workshop years ago, a colleague commented “just because you say it, doesn’t mean students hear it.” That was a game changer comment for me. I have since worked diligently to develop and revise effective active learning, investigative activities for my classes of 130+ students, complete with lots of props, questions to answer, fill-in-the-blank diagrams, dedicated time to create and peer review concept maps, etc. These days, I spend more time supporting my students as they work through these activities, gauge their understanding, and self-test before our exams.

Despite many of these efforts, my students continued to struggle academically, while simultaneously not taking advantage of help sessions offered outside of class. Both of these issues are impacted by more systemic problems including fixed (vs. growth) mindsets, mental health struggles, and socioeconomic challenges (e.g. demanding work schedules, being first generation college students, and lack of math/science backgrounds). In an effort to better understand their academic challenges, I surveyed my 300+



students. I needed to amplify their voice so that I could begin creating an academic journey and toolkit to better meet their needs and empower them. Time management and self-testing scored high as challenges. Without addressing more of these broader challenges, our lectures (and activities) continue to be “unheard” by many of our students.

Student buy-in to our pedagogical practices represents an additional layer of challenges. For example, at the beginning of each school year, students are often told they need to ramp up their efforts because things are going to be harder this year. Based on conversations with my students, they don’t have to consistently do more to get by with a decent GPA in high school. This helps explain why they are perplexed when their status quo effort doesn’t yield passing grades in college, specifically in their science courses. Repeated failure contributes to a sense of not

belonging, increased anxiety, and inefficacy. As instructors, we know we can get farther faster with student buy-in. But statements like “you’ll need to do more” at the beginning of our courses are also going “unheard” by many of our students.

Enter the LASSI and LASSI Modules

The LASSI is a powerful teaching tool because it represents a mechanism by which we can prove or justify to students that their academic strategies need to evolve. My students take the LASSI at the beginning of the course. It assesses them across 10 scales (e.g. time management, self-testing, test strategies, ability to cope with anxiety, etc.). I share a graph of average LASSI scores that I calculated across my classes (for each of the 10 LASSI scales). As a learning community, my students (and I) can easily visualize challenges in their study skills. As individuals, each student can also readily identify their greatest challenges among the 10 scales surveyed, from their own graph of results (received via email).

The LASSI is also a valuable learning tool because my students are able to use their individual LASSI scores to identify their lowest LASSI scales and complete LASSI modules for these scales. The modules provide a reflective opportunity for students to go deeper with their challenges in study skills. The modules allow them to identify some of the underlying factors associated with their struggles and develop mitigation strategies in real time.

Because of this dual functionality, the LASSI is an integral part of my introductory Biology course. LASSI data strongly encourage students to buy in to my academic journey and toolkit that I’ve designed. The toolkit and academic journey focus on creating study plans, building and practicing study skills in class, asking for help, and developing a growth mindset and social belonging. Students more readily accept this process and these strategies/tools due to their experiences with the LASSI. An added bonus of the LASSI is that I gain a better understanding of my students’ challenges, which has contributed to my multi-year efforts to design the journey/toolkit for them.

In yet another survey, I realized that students are often intimidated to reach out for help at our academic support center. Through a pilot program at UNM, I was able to grow my team of undergraduate learning assistants. My team consists of students who have already taken my class and embraced our course toolkit and academic journey. They serve as class leaders and mentors who support students during class activities and in help sessions outside of class. They reinforce study skills, while helping students master content. By empowering students to ask for help, we reinforce the use of academic resources (another study strategy measured on the LASSI).

Students finish my course by completing the LASSI and reflecting on it as part of their toolkit and academic journey. To be transparent and to communicate the value of our journey/toolkit, I

share a second graph of average LASSI #1 vs. #2 results. This allows students to also visualize improvement for our learning community.

Since integrating the LASSI into my course in 2019, I have consistently seen improvement from average LASSI #1 scores to average LASSI #2 scores, across most of the 10 scales every semester. There are a few caveats here. Since 2019, I haven't taught a class that would be considered a control group. That is, I haven't taught a section of students who didn't take the LASSI and/or work through my toolkit. Also, comparing final grades (or some other measure of performance) in pre-2019 sections vs. 2019-present is complicated by changes in my class format over the years. Therefore, statistically teasing apart the potential impacts of the LASSI and/or my course toolkit is complicated. That said, within a fellowship I completed, we compared LASSI #1 scores in fall vs. spring semesters. There was no statistical difference in LASSI #1 scores in fall vs. spring semesters. Simply completing a semester of college in the fall did not translate into higher LASSI #1 scores for my spring students. This suggests that what may help shift LASSI scores is the integration of the LASSI and/or a study skills toolkit into a course.

In summary, the LASSI seems to be an invaluable teaching and learning tool. It offers the opportunity to achieve stronger student buy-in, because students can visualize their challenges (and strengths) as individuals, and even as a learning community. The LASSI modules offer important reflection opportunities with recommendations for habit modification. Students can also visualize their own improvement (and remaining challenges) using LASSI #2 scores. I believe that my students are empowered to move forward faster in their academic journey, due to integration of the LASSI and my study skills toolkit. This is consistently and inspirationally reflected in their comments on reflections and evaluations at the end of the course. Additionally, I constantly receive positive feedback on the LASSI/my course toolkit from former students, as they move forward in their Biology majors. Lastly, I've used LASSI class results to help inform my teaching strategies, shift my focus towards developing a study skills toolkit, and create a comprehensive academic journey upon which my students can embark.

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Use of LASSI PLUS on Our Campus

by Sushilla Knottenbelt, PhD & Olivia McLendon
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The University of New Mexico's Combined BA/MD Degree Program use the LASSI Plus (assessment and prescriptions) as a critical foundation for their mentorship program and in their first-year seminar class designed to support successful college transition. Students take the LASSI pre-assessment early in the semester and are debriefed on the aggregate results as a cohort. Students guess their cohort strengths and weaknesses and then learn to interpret their own results. For the duration of the semester, students choose and complete two sets of prescriptions based on their LASSI pre-test. In addition, responses to reflection prompts on each prescription are emailed to their assigned faculty mentor for feedback. In the second



semester, students complete two additional sets of prescriptions, reflections and the LASSI post-test. A final reflection on their development of learning skills is emailed to their mentor. Students meet with the mentor twice individually and once as a group per semester. Students may complete additional scales if they would like, but we found that students disengaged if we asked them to complete too many – two per semester is a good balance.

We have seen significant gains in LASSI scores for two consecutive years by using this strategy of prescriptions paired with reflections and mentoring. In the past, we used the LASSI pre- and post-test initially without prescriptions and then with prescriptions but without the mentoring component, just using reinforcement of skills during the seminar class. Adding the prescriptions and then the mentoring component improved the LASSI gains compared with either of the two previous iterations.

From reading the student reflections, we learned the obvious — students get what they put in for the LASSI. The mentor can make a big difference in prompting student to dig deeper, or providing alternative resources and answers to questions. The LASSI provided an easy topic of conversation to structure mentor meetings around facilitating the relationship. We believe that being accountable to their mentor in a reflection helps the students take the prompts more

seriously as they want to build a positive rapport with their mentor. We also noted that students can feel threatened by low scores on their pre-test, so reassurance and support from their mentor is crucial. To assist with this, mentors shared that they themselves were still learning about how to be a better and more efficient learner and reassured students that their existing strategies have carried them this far and served them very well. A low LASSI score merely indicates a chance to grow to meet new demands or expectations, and these students preparing for medical school will have no shortage of increasing expectations and demands.

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LASSI for College of Nursing

Abby Horton, EdD, RN, CHC, CLC
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The Learning and Study Strategies Inventory (LASSI) is an assessment tool to facilitate enhanced learning and self-reflection for college students. The LASSI empowers students by offering research-based learning strategies and serves as a helpful resource for students to assess and reflect on their academic skills in the following domains: anxiety, attitude, concentration, information processing, motivation, self-testing, selecting main ideas, test strategies, time management, and using academic resources.

Since Fall 2020, nursing students at The University of Alabama's Capstone College of Nursing enrolled in the *NUR 332: Nursing Student Academic Success* elective course have completed the LASSI Pre- and Post-test, which allows students to assess their own personal and academic growth. NUR 332 is designed to help support first semester nursing students as they transition to the upper division nursing program.

The LASSI enables students to identify their strengths and opportunities for improvement by answering questions in the 10 key areas of academic success previously mentioned. In addition, the incorporation of the LASSI can help students become more confident and successful by identifying their learning styles and effective learning strategies.



It is important to note that the LASSI provides students with immediate feedback about potential areas where they may need to improve their academic knowledge, attitudes, beliefs, and skills. By completing the LASSI Pre- and Post-

tests, students become more aware of their academic needs.

In NUR 332, students complete a journal assignment that offers prompts to foster deeper self-reflection. The journal prompts include:

1. What did you learn from your LASSI Pre- and Post-test Results?
2. What areas were identified as strengths? Discuss.
3. What areas were identified as opportunities for growth? Discuss.

4. How will you use these test results to improve your academic success this semester?
5. Was the LASSI Pre- and Post-test beneficial for you? Why or why not?

The addition of the self-reflective journal assignment requires students to engage and apply what they have learned in a meaningful way. This assignment also captures important student responses to the use of LASSI. Immediate feedback and actionable steps to improve their learning are two of LASSI's benefits students often discuss in their journal assignment.

We have found the LASSI Pre- and Post-tests to be a valuable resource to support our nursing students in the classroom and beyond. The LASSI helps to reinforce and encourage the nursing principle of strategic, life-long learning while preparing students for academic success throughout their nursing school experience.

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LASSI as Part of Academic Success Advising for Medical Students

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The Learning and Study Strategies Inventory (LASSI), 3rd edition, was first used by Academic Success Resources and Services (ASRS), part of the Office of Academic and Career Success (OACS) at Thomas Jefferson University, in 2019. ASRS serves students in a number of, primarily, graduate health science degree programs, and is located in Center City Philadelphia. Initially LASSI use was piloted as part of a pre-orientation program for incoming Doctor of Physical Therapy students intended to help prepare them for the demands of a first-semester anatomy course, and generally to encourage strategic study and effective adjustment to learning in the program.

Later the same year, the decision was made to begin use of the LASSI with students in the Sidney Kimmel Medical College (SKMC). ASRS collaborates in all advising efforts with the Office of Student Affairs and Career Counseling at SKMC, and student advising is managed by Student Affairs Deans. The LASSI has been used with the classes of 2019, 2020, 2021, and this year.

Based upon experience to this point, the LASSI has been found to be an effective tool for motivating students' critical self-reflection about their study practices. In addition, the LASSI has been useful for the following Academic Success purposes:

- A diagnostic tool used to identify areas for intervention and to prompt outreach.
- A counseling tool used to elicit insights that guide conversations in conference, and help with goal-setting and decision-making about possible adjustments that are needed or recommended for individual students.
- An evaluation tool used to assess the influence of student interventions, and to track progress in student self-efficacy, metacognition, and use of resources for support.

Use of the LASSI with SKMC students in year one and year two (phase 1) of the medical education program is planned to include a progression from administration through stages of critical reflection and follow-up to analysis and planning for future use. The LASSI is administered at three points; first year orientation (T1), after the first quarter of study in year one (T2), and again at orientation of year two (T3). Students are given information about the LASSI as an introduction before completing the inventory. Emphasis is placed on the LASSI as

an opportunity for critical reflection and students are encouraged to think of all questions in relation to their recent practices of study. Students are informed that they will receive a report immediately after completion of the inventory, and are encouraged to view the results with curiosity, seeking insight into aspects of learning and study strategies that they might want to or need to address. Students take the LASSI on their own via the provided link and instructions. Discussion of the LASSI, including purpose, the experience of taking it, and how to interpret and use results, is a part of the Academic Success portion of new student orientation.

Students are encouraged to follow up on the experience of taking the LASSI and of reflecting on the results by viewing a series of brief on-demand presentations, each labeled according to relevance to LASSI subscales. Current presentations include: Spaced repetition and self-testing; The study cycle; Study groups as part of effective, efficient, active study; Strategies for dealing with anxiety in study and testing; Test preparation and test-taking; and Using academic resources. Students are further strongly



encouraged to follow up with an individual consultation with ASRS to discuss their LASSI results and strategies for study in JeffMD (the SKMC curriculum).

The LASSI is used as a resource for advising individual students and informing conversations about their studies. So, again, students are encouraged to voluntarily follow up with an individual consultation, but all Student Affairs Deans meet individually with students in their assigned cohort and the LASSI is used as an important resource for those meetings. Advisors have prioritized meetings with students who score below the 50th percentile in three or more subscales. In particular, advisors found that the subscales of ANX, SMI, SFT and TMT have been most relevant and meaningful, especially in relation to the concerns of first-year students. During the meetings, advisors can use the LASSI to learn more about students concerns, address aspects of how to navigate study in the program, and encourage good time management and active study.

In addition to planned advising sessions with new and returning students, outreach is made by Student Affairs Deans to students who perform poorly on assessments. The LASSI is useful for advising at that point as well, especially when a second administration has been completed during the course of the first year, after students have had experience in the program. During year one, students are encouraged to take a second administration of the LASSI (during a week designated as Wellness Week in October) as an opportunity for critical reflection of experiences in the program to date and for planning adjustments going forward. Students are encouraged to have a second meeting with their advisor for individual consultation as follow-up.

Workshops are part of Academic Success initiatives and programming is offered at points throughout the curriculum to provide an opportunity to engage in discussion of strategies informed by practical considerations of time, resources and strategies. Such Academic Success workshops include reference to LASSI subscales and are designed to address student needs that are in part revealed in LASSI results.

The LASSI is administered again at orientation for the start of year two. Completion of the LASSI at that point has proven useful as a comparison to year one results, and as part of advising students with both learning in didactic blocks and study for the Step 1 exam.

Recent analysis of LASSI data to date, viewed in relation to course performance data, including JeffMD curricular assessments and measures like the CBSSA and Step 1, has revealed a number of findings that inform planning for Academic Success efforts to support students. Continued use of the LASSI is supported. While evidence does not indicate the LASSI is useful as a clear predictor of course performance, it has been found to be useful as a way to encourage and develop students' metacognitive awareness, useful as an indicator of concerns to address and strategies to encourage via messaging, interventions and resources, useful as a tool to inform advising, and useful as an indication of changes in student attitudes, awareness, strategies and confidence over time.

Significant improvement was found (8 of 10 subscales) as time and experience progress from T1 to T3. Such improvement is almost certainly related to students learning and gaining confidence from experience in the program, but may also be related, to some degree, to the effect of interventions (orientation, follow-up sessions, on-demand materials, one-on-one consultations).

INP and SFT were found to be significantly higher at T2 than T1; this is important because both are related to developing efficient learning strategies, and both are concerns for new students. Programming is deliberately focused on addressing both.

TST was significantly higher at T3 than T1, which is important for the relationship of test-taking strategies (and related confidence) before transition to Step 1 study. Concerns relative to SFT and TST at later stages (and to CON as well) might be important and of note for advising students in year two.

Data analysis revealed TMT was a predictor for course exam performance in both year one and year two. This finding is especially useful because means of addressing TMT as a topic include focus on study activities and study resources; both of which are main areas of concern among students, are central to learning efficiency, and are consistent points of focus for Academic Success programming and materials.

Lastly, review of the data, particularly related to changes over time, indicate that ANX, ATT, CON, MOT and the affective subscales warrant curiosity and exploration – and attention to

these subscales often lead to fruitful conversation in advising. ANX in particular may mean different things to different students – and students benefit from both open discussion of their experiences and reference to resources and strategies that can lead to meaningful, positive adjustment. This raises the larger point of the need throughout all phases of study in challenging programs like medical education to emphasize to students the range of resources and support available and the benefits of proactive use of such resources. Interestingly, and related to attention to some of these subscales, analysis of LASSI scores in relation to Step 1 scores found that low-performing Step 1 students may have a significantly different response to the ANX, ATT, MOT, TMT and UAR subscales. Further analysis is warranted.

The LASSI has been a valuable resource for Academic Success initiatives in support of SKMC medical students in the first two years of their medical education. A goal of next stages of analysis is to further examine details of LASSI data of low-performing students. Using this information, we may be able to create a “low-performing” student profile. The development of such a profile will help to target academic support resources to those who need it the most as early as possible.

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LASSI & Modules of Strategic Learning Videos

Taylor Acee, PhD
Texas State University

Hardly a day passes in which H&H does not receive a call from a school administrator, instructor, or student with a question about LASSI. We answer them, of course, but have a concern that many who have questions never make the call.

In response, Dr. Taylor Acee, co-author of the LASSI, LASSI PLUS+, and LASSI Instructional Modules) (and who studied under Dr. Claire Ellen Weinstein) produced a 30-minute video to (a) describe the ten scales of LASSI and (b) explain effective ways to apply the central purpose of each scale. Taylor is also sharing his video lecture on the Modules of Strategic Learning.

We think Taylor's videos will go far in answering the questions administrators, instructors, and students might have. Click or copy the links below to view the videos.

This video overviews the LASSI and provides ideas for how to explain the LASSI results to students:

<https://vimeo.com/536600841>

This video oversees the Models of Strategic Learning:

<https://www.youtube.com/watch?v=XeR33C4gzXQ>

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