



***Strategic  
Learning  
Assessment***

***High School  
Version***

## **User's Manual**

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by

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# Strategic Learning Assessment

## High School (SLA-HS) User’s Manual

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# PART 1: OVERVIEW OF THE STRATEGIC LEARNING ASSESSMENT – HIGH SCHOOL VERSION

The Strategic Learning Assessment – High School (SLA-HS) is a comprehensive self-assessment tool designed to empower high school students to develop skills that will improve their academic performance. The SLA-HS is both diagnostic and prescriptive. As a diagnostic tool, it helps identify students' strengths and opportunities for growth in key learning areas (e.g., communication, test preparation, critical thinking, etc.). As a prescriptive tool, it provides tailored recommendations and strategies for improvement. The SLA-HS assesses critical psychological and motivational factors, called key learning areas, that significantly influence learning and academic performance. Each factor is causative in nature, accounts for a meaningful amount of the variation in student success, and is amenable to change through educational intervention. The overarching goal is to help students become more strategic, self-regulated lifelong learners.

High school students often face difficulties identifying and addressing their unique learning challenges. This lack of awareness can impede academic success. While current assessment tools provide valuable insights, they may not always offer the depth and specificity needed for practical guidance and improvement. The SLA-HS addresses this issue by offering a thorough, strengths-focused approach to learning assessment and development, based on the latest research in educational psychology and learning theory.

The SLA-HS is a self-administered questionnaire comprised of 55 items, each rated on a five-point Likert scale. The assessment covers 11 key learning areas, which consists of essential learning strategies and study skills that provide a holistic view of the student's learning profile. These key learning areas include: Communication, Critical Thinking, Effective Learning Strategies, Focus and Concentration, Growth Mindset, Persistence, Seeking Help, Sense of Belonging, Stress Management, Test Preparation, and Time Management. Each area focuses on topics that students can actively employ to directly influence or improve their own learning, going beyond passive reception of information and helping students take charge of their learning process. Upon completion of the assessment, students receive a personalized Profile Report outlining their strengths and areas for growth, along with actionable recommendations to enhance their academic performance. Student and group data are available to instructors/advisors through the Administrative Dashboard, where multiple reports and downloadable data are available.

## PART 2: DESCRIPTION OF THE INDIVIDUAL LEARNING AREAS

The SLA-HS is comprised of 11 key learning areas designed to assess factors that contribute to student learning and academic success. These areas, grounded in educational psychology and learning theory research, provide a comprehensive picture of a student's learning profile. This section provides a detailed description of each learning area, including its theoretical underpinnings, the specific skills and strategies it measures, and the potential challenges high school students may face in that area. Each learning area description concludes with a list of references that provide further support and context for the information presented. Understanding the nuances of each area is essential for interpreting student results, providing tailored feedback, and developing effective interventions to support student learning and growth.

### LEARNING AREAS

- Communication
- Critical Thinking
- Effective Learning Strategies
- Focus and Concentration
- Growth Mindset
- Persistence
- Seeking Help
- Sense of Belonging
- Stress Management
- Test Preparation
- Time Management

### COMMUNICATION

Communication skills are fundamental to academic success in high school. They are the tools students use to understand and be understood, to engage with their learning environment, and to advocate for themselves. Students who can communicate effectively are better equipped to participate in class discussions, build relationships with teachers and peers, and express their ideas in a clear and concise manner.

#### Challenges Faced by Students with Weak Communication Skills

Students who lack strong communication skills often face a range of academic and social challenges. They may struggle to:



- **Comprehend complex information:** Difficulty in understanding instructions, lectures, or feedback can lead to confusion and hinder academic progress.
- **Participate in class:** Fear of public speaking or discomfort in group settings can limit active engagement and learning opportunities.
- **Build relationships:** Difficulty initiating or maintaining conversations can lead to social isolation and hinder collaboration on group projects.
- **Express their needs:** Students may struggle to seek help from teachers or advocate for themselves when facing academic challenges.
- **Perform well on assessments:** Inability to articulate thoughts and ideas clearly can negatively impact performance on written assignments, oral presentations, and exams.

## The Importance of Developing Communication Strategies

Developing effective communication strategies is crucial for students to overcome these challenges and achieve academic success. By acquiring the necessary skills and techniques, students can:

- **Enhance comprehension:** Active listening, asking clarifying questions, and summarizing information are vital for understanding complex concepts.
- **Increase participation:** Practicing public speaking, engaging in group discussions, and developing assertiveness can boost confidence and encourage active participation.
- **Foster collaboration:** Learning to effectively communicate ideas, give and receive feedback, and resolve conflicts are essential for successful teamwork.
- **Improve academic performance:** Clear and concise communication leads to better performance on written assignments, oral presentations, and exams.
- **Develop self-advocacy skills:** Learning to express needs, seek help, and advocate for oneself empowers students to take ownership of their learning.

Thus, students who can effectively communicate are better equipped to navigate the challenges of high school, engage with their learning environment, and achieve their academic goals. The Communication area of the SLA-HS provides a valuable tool for identifying students' strengths and areas for growth related to communication, enabling educators to provide targeted support and empower students to become confident and effective communicators.

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## CRITICAL THINKING

Critical thinking is a cornerstone of academic success in high school and beyond. It empowers students to move beyond rote memorization and engage with information in a deeper, more meaningful way. This involves analyzing, evaluating, and synthesizing information from various sources, forming reasoned judgments, and solving problems effectively. As students transition out of high school and pursue the paths of their choosing (such as attending higher education, getting a job, etc.), their ability to think critically becomes increasingly vital for navigating complex challenges and making informed decisions.

### Why Critical Thinking Matters in High School

High school presents students with increasingly complex academic demands. They are expected to engage with challenging texts and formulate their own arguments. These tasks require not just the absorption of information but also the ability to:

- **Analyze and interpret information:** Students must go beyond surface-level comprehension and delve into the underlying meaning of texts, data, and arguments.
- **Evaluate evidence and identify bias:** They must discern between credible and unreliable sources, recognize potential biases, and assess the validity of information presented.
- **Formulate and defend arguments:** Students need to construct well-reasoned arguments supported by evidence and be able to articulate their thoughts and perspectives effectively.
- **Solve problems creatively:** High school coursework often involves open-ended problems that require innovative solutions and the ability to think outside the box.

The items in the Critical Thinking learning area directly address these key aspects, assessing students' ability to break down complex problems, evaluate evidence, identify biases, and engage in thoughtful discourse.

## Challenges and the Learning Process

Developing critical thinking skills is a continuous process that requires effort and dedication. High school students may face several challenges in this area:

- **Egocentrism:** Adolescents may struggle to consider perspectives that differ from their own.
- **Oversimplification:** Complex issues may be reduced to black-and-white thinking.
- **Impulsivity:** Jumping to conclusions without adequate reflection is a common pitfall.
- **Confirmation bias:** Students may favor information that confirms their existing beliefs.

Overcoming these challenges requires intentional practice and guidance. Students need opportunities to engage in activities that promote critical thinking, such as debates, research projects, and problem-solving exercises. The SLA-HS can play a crucial role in identifying areas (e.g., analyzing information, making inferences, challenging their own biases) where students may need additional support in developing these skills.

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## EFFECTIVE LEARNING STRATEGIES

Effective learning strategies (e.g., retrieval practice, spaced repetition, interleaving, dual coding, and feedback-driven metacognition) empower students to acquire, retain, and apply

knowledge effectively, which can foster deep understanding and long-term retention of new information. While natural aptitude plays a role in learning, research consistently demonstrates that the strategic application of learning techniques significantly enhances academic performance.

Many students rely on learning strategies that are intuitive but may not be the most effective. Practices like repeated reading, highlighting, and cramming create an illusion of mastery but fail to promote meaningful learning according to research. These strategies often lead to overconfidence and poor performance on assessments. In contrast, strategies supported by evidence include retrieval practice (i.e., recalling facts, concepts, or events from memory), spaced repetition (i.e., reviewing information at increasing intervals over time), interleaving (i.e., switching attention between two or more topics during a study session), dual coding (i.e., using multiple types of stimuli to help people encode, store, and retrieve information), and feedback-driven metacognition (i.e., the practice of giving the student the ability to know what (s)he does and doesn't know by thinking about their thinking).

## Challenges in Developing Effective Learning Strategies

While research supports the efficacy of various learning strategies, high school students often face challenges in implementing them effectively. Some common obstacles include:

- **Lack of awareness:** Many students are unaware of effective strategies or their benefits.
- **Misconceptions about learning:** Students may hold inaccurate beliefs about how learning works, such as the effectiveness of cramming or simply re-reading notes.
- **Difficulty in self-regulation:** Implementing strategies like spaced repetition and interleaving requires planning and self-discipline.
- **Preference for passive learning:** Students may gravitate towards passive learning approaches (e.g., highlighting, re-reading) due to perceived ease or familiarity.
- **Limited opportunities for practice and feedback:** Students may lack opportunities to practice and refine their learning strategies with guidance and feedback.

The Effective Learning Strategies learning area is designed to assess students' awareness and application of multiple effective learning strategies. By identifying students' strengths and weaknesses in these areas, educators can provide targeted support and guidance. This may involve explicit instruction in strategies, personalized feedback on study habits, and encouragement to experiment with different approaches.

Knowledge of effective learning strategies extends beyond immediate academic gains. It equips students with metacognitive skills and self-regulated learning behaviors that are crucial for success in high school and lifelong learning. Students who are adept at employing effective strategies are better able to monitor their own learning, identify areas for improvement, and adapt their approaches to meet new challenges. Fostering effective learning strategies in high school students is an investment in their present and future success. By promoting these skills, educators empower students to become active, engaged, and self-directed learners.

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## FOCUS AND CONCENTRATION

Focus and concentration are fundamental cognitive skills that play a pivotal role in academic success. These skills enable students to effectively filter out distractions, sustain attention on

tasks, and process information efficiently. In essence, they are the cornerstones of effective learning and academic achievement.

## Why Focus and Concentration Matter

- **Improved Learning and Retention:** When students can concentrate, they are better able to absorb and retain information presented in lectures, and assignments. This leads to a deeper understanding of the subject matter and improved academic performance.
- **Enhanced Productivity and Efficiency:** Students who can maintain focus can complete tasks more quickly and accurately, allowing them to manage their time effectively and reduce stress. This is crucial in high school, where students often juggle multiple subjects and extracurricular activities.
- **Increased Motivation and Engagement:** When students can concentrate and experience success in their studies, they are more likely to feel motivated and engaged in the learning process. This can lead to a greater sense of accomplishment and a more positive attitude towards school.
- **Reduced Errors and Improved Accuracy:** Concentration minimizes careless mistakes, leading to higher quality work and better grades.
- **Better Problem-Solving Abilities:** Focused thinking allows students to analyze problems, identify solutions, and apply critical thinking skills more effectively.

## Challenges

Today's high school students face a barrage of distractions that can hinder their ability to focus and concentrate. The ubiquity of social media, smartphones, and other technologies presents a constant temptation to multitask and deviate from academic tasks. Research has shown that even brief interruptions from digital devices can significantly impair concentration and learning. Furthermore, adolescents are undergoing significant neurological development, which can affect their impulse control and ability to sustain attention. Stress, lack of sleep, and poor nutrition can also negatively impact focus and concentration.

## The Need for Study Strategies and Skills

Given these challenges, it is crucial for high school students to develop effective study strategies, skills, and techniques to improve their concentration and focus. This includes:

- **Creating a Distraction-Free Study Environment:** Having a dedicated study space free from distractions like phones, social media, and television can significantly improve concentration.
- **Practicing Mindfulness and Self-Awareness:** Learning to recognize when their mind is wandering and employing strategies to refocus is essential.
- **Time Management Techniques:** Breaking down tasks into smaller, manageable chunks and scheduling regular breaks can improve productivity and focus.
- **Active Learning Strategies:** Engaging in active learning techniques, such as note-taking, summarizing, and teaching the material to others, can enhance concentration and retention.

By incorporating these strategies and skills, students can learn to overcome distractions, improve their focus, and ultimately achieve greater academic success. The Focus and Concentration learning area of the SLA-HS aims to assess these critical skills and provide valuable insights to educators and students alike.

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## GROWTH MINDSET

In high school, students are challenged by academic coursework, complex social dynamics, and pressures to make decisions that will impact their futures. It is during these formative years that a growth mindset becomes crucial for navigating challenges and achieving academic

success. The Growth Mindset learning area of the SLA-HS is designed to help educators identify students' beliefs about their abilities and tailor interventions to foster a mindset conducive to learning and growth.

## Challenges in Fostering a Growth Mindset

Many students enter high school with preconceived notions about their abilities. Some may have been praised for their “intelligence” in the past, leading them to believe that their abilities are fixed. Others may have experienced setbacks that led them to doubt their capacity to learn and grow. The distinction between fixed and growth mindsets significantly influences how students perceive feedback, setbacks, and challenges.

## The Impact of Mindset on Student Perception

Students with a **growth mindset** are more likely to:

- Embrace challenges as opportunities for growth and learning,
- Perceive feedback as constructive input to guide improvement rather than a personal criticism,
- Persist in the face of setbacks, viewing them as temporary obstacles to overcome, and
- Value effort and understand that hard work is essential for success.

Conversely, students with a **fixed mindset** tend to:

- Avoid challenges to protect a challenge to their perceived abilities,
- View feedback as a personal attack on their intelligence or competence,
- Give up easily when faced with setbacks, attributing failures to inherent limitations, and
- Overemphasize innate talent and underestimate the role of effort.

## Implications for Educators and Support Staff

Understanding a student's mindset is crucial for effective teaching and support. By assessing a student's growth mindset, teachers, counselors, and administrators can:

- Tailor feedback and interventions to resonate with the student's perspective,
- Build resilience by emphasizing the role of effort and perseverance,
- Foster a supportive environment that encourages risk-taking and learning from mistakes, and
- Provide appropriate resources and strategies to help students develop a growth mindset.



For instance, a student with a fixed mindset might benefit from reassurance about their abilities while focusing on specific strategies to improve performance. In contrast, a student with a growth mindset might respond well to challenges and opportunities for skill development.

The SLA-HS's Growth Mindset learning area is designed to help identify a student's mindset and inform tailored support strategies. By understanding a student's perspective on intelligence, effort, and setbacks, educators can create a more effective and impactful learning environment thus helping students develop the mindset and skills necessary for academic success in high school and beyond.

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## PERSISTENCE

Persistence, or the ability to persevere despite challenges and setbacks, is a critical skill for academic success in high school and beyond. Students who demonstrate persistence are more likely to achieve their academic goals, graduate high school, and successfully transition to paths of their choosing, such as pursuing further education or employment. The high school environment presents numerous challenges that require students to utilize persistence in order to succeed.

### Importance of Persistence

- **Academic Rigor:** High school coursework becomes increasingly demanding, requiring students to grapple with complex concepts, manage their time effectively, and develop

independent learning strategies. Persistence enables students to overcome academic hurdles, dedicate the necessary effort to master challenging material, and maintain motivation even when faced with setbacks.

- **Increased Independence:** Beyond high school, students often have greater autonomy and responsibilities for their learning, which heightens their need to self-advocate, and be self-determined more broadly. Students need to be proactive in seeking help, managing their workload, and staying organized not only to remain on track academically with their current courseloads but help them prepare for their transition into adulthood. Persistence helps students develop self-discipline, take ownership of their learning, and persevere through challenges without constant external support.
- **Social and Emotional Factors:** Adolescence is a period of significant social and emotional development. Students may encounter peer pressure, social distractions, and emotional fluctuations that can impact their academic performance. Persistence helps students maintain focus, manage stress, and overcome obstacles that may hinder their academic progress.
- **Preparation for the Future:** Persistence is not only crucial for academic success in high school but also for success in college, careers, and life in general. By fostering persistence in high school, students develop resilience, a growth mindset, and the ability to tackle challenges head-on—essential qualities for navigating the complexities of higher education and the professional world.

## The Role of Study Strategies in Persistence

Developing effective study strategies can significantly improve a student's ability to persevere through academic challenges. These strategies include:

- **Goal Setting:** Setting clear, achievable goals for coursework provides a roadmap for progress and helps students maintain focus.
- **Effective Time Management:** Knowing how to allocate time effectively for studying, assignments, and other commitments allows students to avoid feeling overwhelmed and maintain consistent effort.
- **Self-Regulated Learning Skills:** Developing skills like self-monitoring, critical thinking, and metacognition allows students to identify areas of difficulty, adjust their study approach, and persist through challenges.

## Measuring Persistence

By measuring a student's approach to academic challenges, the Persistence learning area provides valuable feedback to the student as well as insights for teachers and support providers. This information can be used to identify students who may benefit from interventions that target learning skills development, goal-setting strategies, and self-regulation techniques to bolster persistence and ultimately enhance academic success.

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## SEEKING HELP

The Seeking Help learning area measures the ability of students to proactively seek assistance when facing academic difficulties. This skill is crucial because it allows students to address learning gaps, develop effective learning strategies, and ultimately achieve their full academic potential.

Research consistently shows a strong correlation between help-seeking behavior and academic achievement. Students who actively seek help tend to have higher grades, greater

academic self-efficacy, and increased motivation. This is because seeking help allows students to:

- **Gain clarity and understanding:** When students encounter difficult concepts or assignments, seeking help from teachers, peers, or other resources can provide the necessary clarification and support to overcome these challenges.
- **Develop effective learning strategies:** By asking questions and seeking guidance, students can learn new approaches to studying, problem-solving, and time management.
- **Build self-awareness:** The process of seeking help encourages students to reflect on their own learning processes, identify their strengths and weaknesses, and develop metacognitive skills.
- **Foster a growth mindset:** Seeking help demonstrates a willingness to learn and grow, which is essential for developing a growth mindset and overcoming academic setbacks.

## Challenges to Seeking Help in High School

Despite the clear benefits, many students are reluctant to seek help. This resistance can stem from various factors, including:

- **Fear of appearing incompetent:** Students may worry that asking for help will make them seem less intelligent or capable in the eyes of their teachers and peers.
- **Concerns about social stigma:** Seeking help can be perceived as a sign of weakness or dependence, leading some students to avoid it to maintain their social standing.
- **Lack of awareness of available resources:** Students may not know where to turn for help or may be unaware of the various support systems available to them.
- **Previous negative experiences:** Past experiences of feeling dismissed or judged when seeking help can discourage students from reaching out again.

Overcoming these barriers and fostering a culture of help-seeking is crucial. Educators can play a vital role in creating a supportive environment where students feel comfortable asking for assistance. Emphasizing the importance of effort, persistence, and learning from mistakes can help reduce the stigma associated with seeking help. Providing clear information about available resources and offering encouragement and positive reinforcement can also empower students to take ownership of their learning and seek the support they need. By assessing and promoting help-seeking behavior, the Seeking Help learning area can help educators identify students who may be struggling and provide them with the necessary support to succeed.

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## SENSE OF BELONGING

A sense of belonging is a fundamental human need. It’s the feeling of being accepted, valued, and included in a community. For high school students, this sense of belonging within their school environment is intrinsically linked to their academic success and overall well-being. When students feel like they belong, they are more likely to engage in learning, participate in class, build positive relationships with peers and teachers, and ultimately achieve their academic goals.

### Challenges to Belonging for High School Students

The high school years are a time of significant transition and change, presenting unique challenges to students’ sense of belonging. These challenges include:

- **Social pressures:** Adolescence is often characterized by a heightened awareness of social status and peer acceptance. Students may struggle with fitting in, finding their social group, or navigating complex social dynamics.

- **Academic pressures:** The increasing academic demands of high school can lead to stress, anxiety, and feelings of inadequacy, particularly for students who struggle academically or compare themselves to peers.
- **Identity development:** High school is a critical period for identity formation. Students are exploring their values, beliefs, and interests, and may feel uncertain or insecure about their place in the world. This can be further complicated for students from marginalized or underrepresented groups who may face additional challenges related to discrimination or prejudice.
- **School transitions:** Moving from middle school to high school, or changing schools during high school, can disrupt students' social connections and sense of belonging. New environments, routines, and social groups can be intimidating and make it difficult for students to feel connected.

## Why Belonging Matters

Research consistently demonstrates the powerful impact of belonging on academic outcomes. Students who feel a strong sense of belonging in school are more likely to achieve higher grades, have better attendance, develop positive social skills, and experience improved mental health.

## Developing Strategies, Skills, and Techniques

It is essential for school personnel (e.g., educators, administrators, school counselors, etc.) to prioritize creating a school environment that fosters a sense of belonging for all students. This involves implementing strategies, skills, and techniques that:

- **Promote inclusivity:** Create a welcoming and accepting environment where all students feel valued and respected, regardless of their background, identity, or academic abilities.
- **Encourage positive relationships:** Foster positive relationships between students and teachers, as well as among students themselves, through team-building activities, peer mentoring programs, and opportunities for social interaction.
- **Provide academic support:** Offer academic support and resources to help students succeed academically and build confidence in their abilities.
- **Facilitate student involvement:** Encourage student involvement in extracurricular activities, clubs, and organizations to help them find their niche and connect with peers who share their interests.

By prioritizing belonging, schools can create a supportive and inclusive community where all students can thrive. The Sense of Belonging learning area provides a valuable tool for assessing and addressing this crucial aspect of the student experience. By using this information to inform interventions and strategies, schools can empower students to develop a strong sense of belonging, leading to improved academic outcomes, enhanced well-being, and greater success in their high school journey and beyond.

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## STRESS MANAGEMENT

Stress management is a critical skill for academic success in high school. Adolescents face many academic, social, and personal pressures that can significantly impact their well-being and ability to thrive in school. When left unchecked, stress can hinder academic performance by impairing cognitive function, making it difficult to focus, learn, and retain information. This can lead to lower grades, poor test performance, and difficulty completing assignments. High stress levels can also increase absenteeism, as students may miss school due to physical and mental health concerns, further hindering their academic progress. Moreover, chronic stress

can drain students' energy and enthusiasm, leading to disengagement in the classroom and a lack of motivation to pursue academic goals. Unmanaged stress can even contribute to a range of health issues, including sleep disturbances, anxiety, depression, and substance abuse.

## Challenges to Stress Management in High School

High school students often face unique challenges in managing stress, including:

- **High academic expectations:** The pressure to achieve good grades, excel in extracurricular activities, and, for many, secure college admissions can be overwhelming.
- **Social pressures:** Navigating social dynamics, peer relationships, and social media can create significant stress, particularly in the context of identity formation and self-esteem.
- **Lack of coping skills:** Many students lack the knowledge and skills to effectively manage stress, leading to unhealthy coping mechanisms or avoidance behaviors.
- **Time management difficulties:** Balancing academic demands, extracurricular activities, and personal life can be challenging, leading to feelings of being overwhelmed and stressed.

## The Importance of Developing Stress Management Strategies

Equipping students with effective stress management strategies is crucial for their academic success and overall well-being. By learning to manage stress, students can:

- **Improve academic performance:** Effective stress management techniques can enhance focus, concentration, and memory, leading to improved academic performance.
- **Enhance resilience:** Developing coping skills empowers students to navigate challenges and setbacks with greater resilience and confidence.
- **Promote positive mental health:** Stress management techniques can help reduce anxiety, improve mood, and foster a sense of well-being.
- **Develop lifelong skills:** Learning to manage stress in high school equips students with valuable skills that will benefit them throughout their lives.

The Stress Management learning area is designed to assess students' ability to cope with stress and identify areas where they may need additional support. By understanding students' stress management skills, educators can provide targeted interventions and resources to help them thrive both academically and personally.



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## TEST PREPARATION

Research consistently demonstrates a strong correlation between effective test preparation strategies and academic achievement. Students who engage in proactive planning, utilize effective study methods, and employ strategic test-taking techniques tend to exhibit higher levels of academic performance. Conversely, students who lack these skills often underperform on tests, regardless of their subject matter knowledge. This can lead to decreased motivation, lowered self-efficacy, and a negative impact on overall academic progress.

### Key Dimensions of Test Preparation

The Test Preparation learning area encompasses several key dimensions, drawing upon established research in cognitive psychology and educational best practices:

- **Metacognitive Regulation:** This involves students' awareness and understanding of their own learning processes. It includes the ability to self-assess strengths and weaknesses, set realistic study goals, and monitor progress.
- **Study Strategies:** Effective study strategies go beyond rote memorization and encompass techniques like retrieval practice, spaced repetition, interleaving, dual coding, and feedback-driven metacognition as discussed under Effective Learning Strategies.
- **Test-Taking Strategies:** This involves understanding the structure and format of different types of tests, managing time effectively during exams, and employing strategies to approach various question types (e.g., multiple-choice, essay).

## Benefits of the Test Preparation Learning Area

The Test Preparation learning area offers several benefits for educators and students alike:

- **Early Identification of Needs:** By identifying students who lack effective test preparation strategies, educators can intervene early and provide targeted support, such as skill development workshops or individualized coaching.
- **Personalized Learning:** The area can inform the development of personalized learning plans tailored to individual student needs.
- **Improved Academic Performance:** Equipping students with strong test preparation skills can lead to improved test scores, increased confidence, and enhanced academic performance overall.
- **Data-Driven Decision Making:** The area provides valuable data that can be used to inform school-wide initiatives to promote student success.

The Test Preparation learning area is designed to assess students' ability to effectively prepare for and perform on academic tests. This area recognizes that successful test performance is not solely based on knowledge acquisition, but also on the strategic application of test preparation and test-taking techniques. By evaluating these skills, educators can gain valuable insights into areas where students may need additional support to reach their full academic potential.

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## TIME MANAGEMENT

Time management is a critical skill for academic success, serving as a cornerstone for effective learning, performance, and overall well-being. As students navigate the demands of secondary education, mastering time management strategies becomes essential for balancing academic workloads, extracurricular activities, and personal life.

### Challenges to Time Management in High School

During high school, students often balance a number of competing academic (e.g., preparing for tests or completing assignments) and non-academic (e.g., engaging in extracurricular activities, part-time jobs, or other social gatherings) demands, requiring the need to manage their time efficiently. Without effective time management skills, students may experience heightened stress, procrastination, and a sense of being overwhelmed, ultimately impacting their academic performance and overall well-being.

### Developing Time Management Skills

Developing strong time management skills empowers students to:

- **Reduce Stress and Anxiety:** By proactively planning and organizing their time, students can minimize feelings of being overwhelmed and reduce anxiety related to deadlines and academic performance.
- **Improve Academic Performance:** Effective time management allows students to dedicate sufficient time to studying, completing assignments, and preparing for assessments, leading to improved academic outcomes.
- **Increase Productivity and Efficiency:** Students who can prioritize tasks, avoid distractions, and utilize focused study sessions are likely to complete their work more efficiently and effectively.
- **Enhance Self-Discipline and Responsibility:** Learning to manage time fosters self-discipline, responsibility, and a sense of agency, skills that are crucial for success both in and out of the classroom.
- **Promote Work-Life Balance:** Effective time management enables students to balance their academic responsibilities with extracurricular activities, hobbies, and social engagements, fostering a healthy and well-rounded lifestyle.

The Time Management learning area assesses various aspects of time management, including planning and prioritizing, avoiding procrastination, utilizing organizational tools, and maintaining a balanced lifestyle. By identifying students' strengths and areas for improvement in these areas, educators can provide targeted support and guidance to help them develop effective time management strategies. This, in turn, can contribute to improved academic performance, reduced stress, and increased well-being for high school students.

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## PART 3: RESEARCH EVIDENCE BASE

The Strategic Learning Assessment – High School (SLA-HS) is grounded in a rich tapestry of research from educational psychology and learning theory. This section explores five key theoretical frameworks that provide a foundation that underpin the SLA-HS:

1. Metacognitive Strategies
2. Information Processing Model
3. Model of Strategic Learning
4. Social Learning Theories
5. Self-Determination and Self-Regulated Learning

Table 1 illustrates how the SLA-HS learning areas are linked to each of the learning strategies frameworks.

SLA-HS Learning Areas	Metacognitive Strategies	Information Processing Model	Model of Strategic Learning	Social Learning Theories	Self-Determination and Self-Regulated Learning
Communication	x		x	x	x
Critical Thinking	x	x	x	x	
Effective Learning Strategies	x	x	x	x	x
Focus and Concentration	x	x	x	x	x
Growth Mindset	x	x		x	x
Seeking Help	x		x	x	x
Persistence	x	x			x
Sense of Belonging				x	x
Stress Management	x	x	x		x
Test Preparation	x	x	x	x	x
Time Management	x	x	x	x	x

## METACOGNITION STRATEGIES

Metacognition, often referred to as “thinking about thinking,” involves awareness and understanding of one’s own cognitive processes. Metacognitive strategies are deliberate actions learners take to plan, monitor, and evaluate their learning. These strategies empower learners to become more self-regulated, independent, and successful in academic pursuits.

The SLA-HS directly assesses metacognitive strategies through several learning areas, such as Effective Learning Strategies, Test Preparation, and Time Management. These areas measure students’ use of planning, monitoring, and evaluating strategies, providing insights into their metacognitive abilities and identifying areas where they can develop more effective learning approaches.

### Widely Agreed Upon Metacognitive Strategies

#### 1. Planning:

- Setting goals
- Activating prior knowledge
- Predicting outcomes
- Selecting appropriate strategies

#### 2. Monitoring:

- Self-questioning
- Checking for understanding
- Identifying confusion or difficulties
- Tracking progress

#### 3. Evaluating:

- Assessing performance
- Reflecting on strategies used
- Identifying areas for improvement
- Adjusting plans as needed

#### 4. Debugging:

- Identifying and correcting errors
- Seeking help when needed
- Revising strategies

## 5. Self-Regulation:

- Managing time and effort
- Motivating oneself
- Controlling emotions and distractions

### Additional Strategies:

- **Think-aloud:** Verbalizing thoughts and reasoning while working on a task.
- **Summarizing:** Condensing information into key points.
- **Creating analogies:** Relating new information to familiar concepts.
- **Using graphic organizers:** Visually representing information.

By employing metacognitive strategies, learners can gain deeper insights into their own learning processes, identify strengths and weaknesses, and make informed decisions about how to optimize their learning experiences. The research clearly demonstrates the effectiveness of metacognitive strategies in promoting academic success and lifelong learning. The SLA-HS provides a valuable tool for assessing these strategies and empowering students to become more metacognitive learners.

### Selected Citations and Findings

- Flavell, J.H. (1979). Metacognition and Cognitive Monitoring: A New Area of Cognitive-Developmental Inquiry. *American Psychologist*, 34, 906-911.
  - This seminal work introduced the concept of metacognition and laid the foundation for further research.
- Brown, A. L. (1987). *Metacognition, Executive Control, Self-Regulation, and other more Mysterious Mechanisms*.
  - This paper explored the relationship between metacognition and self-regulation, highlighting the importance of metacognitive strategies for successful learning.
- Schneider, W., & Pressley, M. (1997). *Memory Development Between Two and Twenty* (2nd ed.). *Psychology Press*. <https://doi.org/10.4324/9780203774496>.
  - This book delves into the development of memory and metacognitive skills throughout childhood and adolescence, emphasizing their role in academic achievement.

- Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving Students' Learning With Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology. *Psychological science in the public interest : a journal of the American Psychological Society*, 14(1), 4–58. <https://doi.org/10.1177/1529100612453266>.
  - This review article synthesized research on various learning techniques, including metacognitive strategies, and found that they can significantly enhance learning outcomes.



## INFORMATION PROCESSING MODEL

The Information Processing Model (IPM) offers a framework to understand how learners acquire, process, store, and retrieve information. It likens the human mind to a computer, with input, processing, storage, and output stages. While the IPM has its roots in cognitive psychology dating back several decades, its relevance in understanding study skills remains pertinent, with recent research continuing to refine and expand upon its principles.

Specific Skills and Strategies Addressed in the Information Processing Model		
	Skills	Strategies
<b>Sensory Memory</b>	Paying attention and selecting relevant information from the environment.	Minimizing distractions and focusing on the task at hand.
<b>Working Memory (Short-Term Memory)</b>	Holding information in mind while actively processing it.	Chunking information, using mnemonic devices, rehearsal, elaboration.
<b>Long-Term Memory</b>	Storing information for later retrieval.	Organizing information, creating meaningful connections, using retrieval practice, spaced repetition.
<b>Encoding</b>	Transforming information into a format that can be stored in memory.	Elaboration, creating visual representations, summarizing.
<b>Retrieval</b>	Accessing information from memory when needed.	Using retrieval cues, self-testing, practicing in a variety of contexts.
<b>Metacognition</b>	Monitoring and regulating one's own cognitive processes.	Planning, setting goals, monitoring comprehension, evaluating progress, adjusting strategies.

By understanding and applying the principles of the Information Processing Model, learners can develop effective study strategies that optimize their cognitive processes and enhance their academic performance. This model provides a valuable framework for educators to design instructional materials and activities that support information processing and promote deep learning. The SLA-HS contributes to this understanding by providing a comprehensive assessment of students' information processing skills, for example, in the following learning areas: Critical Thinking, Effective Learning Strategies, Test Preparation, and Time Management.

### Selected Citations and Findings

- Alloway, T. P., & Alloway, R. G. (2010). Investigating the Predictive Roles of Working Memory and IQ in Academic Attainment. *Journal of Experimental Child Psychology*, 106, 20-29.

- This study highlights the role of working memory, a central component of IPM, in academic success.
- Dehn, M. J. (2008). *Working Memory and Academic Learning Assessment and Intervention*. New Jersey: John Wiley & Sons, Inc.
  - This book provides a comprehensive overview of working memory and its implications for academic learning, offering practical strategies for intervention.
- Gestsdóttir, S., & Lerner, R. M. (2008). Positive Development in Adolescence: The Development and Role of Intentional Self-Regulation. *Human Development* 51(3):202-224.
  - This study discusses the role of cognitive processes, including those outlined in the IPM, in adolescent development and learning.
- Mayer, R. E. (2014). Incorporating Motivation Into Multimedia Learning. *Learning and Instruction*, 29, 171-173.
  - This study explores the interaction between motivation and cognitive processes in multimedia learning environments, emphasizing the importance of attention and engagement in information processing.

## MODEL OF STRATEGIC LEARNING

Claire Ellen Weinstein's Model of Strategic Learning (MSL) is a comprehensive framework that emphasizes the learner's active role in the learning process. It identifies four key components crucial for successful learning: Skill, Will, Self-Regulation, and Academic Environment. The SLA-HS aligns with the MSL by assessing multiple facets of strategic learning.

### Strategies for Increasing Students' Ability to Learn:

- **Explicitly teach learning strategies:** Model, explain, and provide opportunities for practice.
- **Foster metacognition:** Help students become aware of their thinking processes and how to regulate them.
- **Encourage self-regulation:** Teach students how to set goals, monitor progress, and adjust strategies as needed.
- **Create a supportive learning environment:** Provide a positive and structured environment that promotes engagement and autonomy.
- **Personalize instruction:** Tailor instruction to meet individual needs and interests.

By addressing all four components of the Model of Strategic Learning, educators can create a more holistic and effective approach to teaching and learning that empowers students to become strategic and independent learners. The SLA-HS serves as a valuable tool in this process by providing insights into students' strengths and needs across these key components.

### Selected Citations and Findings

- Weinstein, C. E. (1994). Strategic learning/strategic teaching: Flip sides of a coin. In P. R. Pintrich, D. R. Brown, & C. E. Weinstein (Eds.), *Student motivation, cognition, and learning: Chapter in honor of Wilbert J. McKeachie* (pp. 257-273). Hillsdale, NJ: Lawrence Erlbaum.
  - Wilbert J. McKeachie's extensive research on various aspects of college teaching and learning, including student motivation, cognition, and different instructional approaches, has significantly influenced the field of higher education.

- Weinstein, C. E., Husman, J., & Dierking, D. R. (2000). Self-Regulation Interventions with a Focus on Learning Strategies. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of Self-Regulation* (pp. 727–747). Academic Press.
  - This chapter provides an overview of research on self-regulation interventions and highlights the importance of learning strategies in promoting self-regulated learning.
- Weinstein, C. E., Acee, T. W., and Jung, J.-H. (2010). Learning strategies. In B. McGaw, P. L. Peterson, and E. Baker (Eds.), *International Encyclopedia of Education* (3rd Ed., pp. 323–329). New York: Elsevier.
  - This chapter provides an overview of learning strategies, encompassing behavioral, cognitive, metacognitive, motivational, and affective processes that facilitate the understanding, learning, and integration of new knowledge and skills.

## SOCIAL LEARNING THEORIES FRAMEWORK FOR EFFECTIVE LEARNING

Social learning theories emphasize the importance of social interaction, observation, and modeling in the learning process. These theories posit that learners acquire knowledge and skills not only through direct experience but also by observing and imitating others. In the context of study skills, social learning theories highlight the value of collaborative learning environments, peer interactions, and the influence of role models.

Specific Skills and Strategies Widely Accepted as Part of the Social Learning Theories Framework		
	Skills	Strategies
<b>Observational Learning</b>	Learning by observing the behaviors and actions of others (models).	Watching instructional videos, observing demonstrations, attending study groups, seeking feedback from peers and mentors.
<b>Modeling</b>	Imitating the behaviors and actions of others to learn new skills and knowledge.	Practicing skills alongside a model, role-playing, receiving constructive feedback from others.
<b>Vicarious Reinforcement</b>	Learning from the consequences of others' actions.	Observing the successes and failures of others, receiving feedback and rewards for imitating desirable behaviors.
<b>Self-Efficacy</b>	Believing in one's ability to succeed in a particular task or situation.	Setting achievable goals, receiving positive feedback, observing successful models, building confidence through practice and mastery.
<b>Collaborative Learning</b>	Working with others to achieve a common learning goal.	Participating in study groups, engaging in peer tutoring, collaborating on projects, discussing and debating ideas.
<b>Social Persuasion</b>	Being influenced by the encouragement and support of others.	Seeking feedback and encouragement from peers, mentors, and teachers, participating in supportive learning communities.

By incorporating social learning strategies into their study routines, learners can benefit from the power of social interaction, observation, and modeling. These strategies can enhance motivation, self-efficacy, and engagement, leading to improved learning outcomes and academic success. The SLA-HS can help identify students who may benefit from interventions that promote social learning strategies and foster a more collaborative learning environment, for example, in the following learning areas: Effective Learning Strategies, Growth Mindset, Seeking Help, Sense of Belonging, etc.

## Selected Citations and Findings

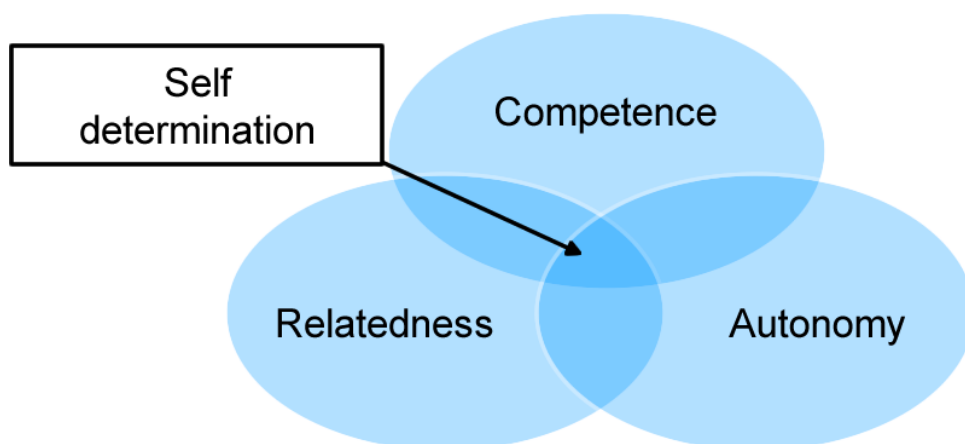
- Schunk, D. H., & Zimmerman, B. J. (Eds.). (2008). *Motivation and Self-Regulated Learning: Theory, Research, and Applications*. Routledge.
  - This book explores the role of social influences in motivation and self-regulated learning, highlighting the importance of social learning theories in educational contexts.
- Bandura, Albert (1991). Social Cognitive Theory of Moral Thought and Action. In William M. Kurtines & Jacob L. Gewirtz (eds.), *Handbook of Moral Behavior and Development*.
  - This chapter revisits Bandura's social cognitive theory, a foundational theory in social learning, and discusses its applications to moral development and behavior.
- Kirschner, Paul & Karpinski, Aryn. (2010). Facebook and academic performance. *Computers in Human Behavior*. 26. 1237-1245. 10.1016/j.chb.2010.03.024.
  - This article investigates the relationship between social media use and academic performance, highlighting the potential impact of social interactions on learning outcomes.

## SELF-DETERMINATION AND SELF-REGULATED LEARNING

Self-regulated learning (SRL) is a multifaceted framework that emphasizes learners' active and intentional engagement in their learning process. It involves setting goals, selecting and implementing effective learning strategies, monitoring progress, and adjusting strategies as needed. Self-regulated learning is closely aligned with the concept of self-determination, which refers to an individual's inherent motivation to explore, learn, achieve, and grow.

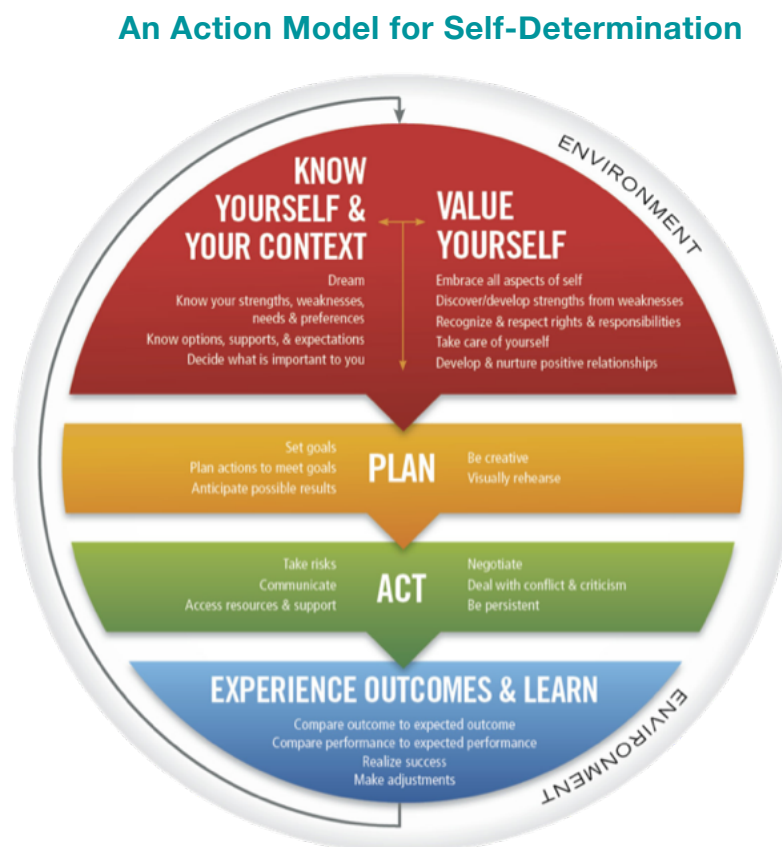
Self-Determination Theory (Ryan & Deci, 2000) claims that we all have an innate need for autonomy, competence, and relatedness. When these three needs are met, we experience increased self-determination and intrinsic motivation. When learners feel a sense of ownership over their learning, believe in their abilities, and feel connected to their learning community, they are exhibiting increased self-determination and are more likely to engage in self-regulated learning behaviors and achieve their goals. According to Self-Determination Theory (SDT) (Figure 1), self-determination is increased by the degree to which an individual's psychological needs for autonomy, competence and relatedness are met.

Figure 1.  
Self-Determination Theory  
(Ryan and Deci, 2000)



The Action Model for Self-Determination (AMSD) (Field & Hoffman, 1992; 2016) delineates the knowledge, skills, and beliefs that individuals need to be more self-determined. The Action Model for Self-Determination is consistent with Self-Determination Theory and delineates the knowledge, beliefs, and skills individuals need to help them meet their psychological needs for autonomy, competence and relatedness and be more self-determined. As illustrated in the AMSD model (Figure 2), the degree to which individuals experience self-determination is affected by the opportunities, supports and barriers in the environment within which one is interacting and by the knowledge, skills, and beliefs that the individual exercises within that environment. There are many steps students can take to learn the knowledge, skills, and beliefs that will help them develop their ability to exercise self-determination. Note that the model is cyclical, demonstrating that each act of self-determination leads to growth in self-determination and increased probability of success in subsequent efforts, making self-determination consistent with Carol Dweck's growth mindset research.

Figure 2.



Field, S. and Hoffman, A. (2015). An Action Model for Self-Determination. Revised from "Development of a Model for Self-Determination," by S. Field and A. Hoffman, 1994, *Career Development for Exceptional Individuals*, 17(2), p. 165. (For permission to reprint, please contact [sharon@beselfdetermined.com](mailto:sharon@beselfdetermined.com).)



## Specific Skills and Strategies within the SRL Framework:

1. **Goal Setting:** Setting clear, specific, and achievable goals that align with personal values and interests.
2. **Planning:** Creating a plan of action to achieve goals, including identifying resources, timelines, and potential obstacles.
3. **Strategy Selection:** Choosing appropriate learning strategies based on the task, personal preferences, and available resources.
4. **Strategy Implementation:** Actively engaging in learning activities, utilizing selected strategies, and monitoring progress.
5. **Self-Monitoring:** Tracking progress towards goals, identifying areas of strength and weakness, and reflecting on learning experiences.
6. **Self-Evaluation:** Assessing the effectiveness of chosen strategies, identifying areas for improvement, and adjusting plans as needed.
7. **Self-Reflection:** Critically analyzing learning experiences, identifying personal strengths and weaknesses, and developing a growth mindset.
8. **Self-Motivation:** Maintaining intrinsic motivation, setting rewards, and seeking support from others.
9. **Self-Efficacy:** Believing in one's ability to succeed, cultivating a positive mindset, and overcoming challenges.
10. **Self-Regulation of Emotions:** Managing emotions such as anxiety, frustration, and boredom, and staying focused on learning goals.

By mastering these SRL and self-determination skills and strategies, learners can become more self-directed, motivated, and successful in their academic pursuits and in other facets of their lives. Educators can foster SRL by providing opportunities for choice, autonomy, and feedback, and by creating a supportive and encouraging learning environment.

## Selected Citations and Findings

- Ryan, R. & Deci, E. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *The American Psychologist*.
  - Ryan and Deci propose that self-determination theory, which emphasizes the importance of fulfilling basic psychological needs for autonomy, competence, and

relatedness, provides a framework for understanding how to foster intrinsic motivation, social development, and well-being.

- Field, S., & Hoffman, A. (1994). Development of a Model for Self-Determination. *Career Development for Exceptional Individuals*, 17(2), 159-169.
  - The authors present a model for fostering self-determination in individuals with disabilities, emphasizing the development of skills and opportunities for choice, control, and autonomy in their lives and careers.
- Zimmerman, B. J. (2013). From Cognitive Modeling to Self-Regulation: A Social Cognitive Career Path. *Educational Psychologist*, 48(3), 135–147.
  - This article traces the development of SRL theory, highlighting the importance of social cognitive factors.
- Panadero, E. (2017). A Review of Self-regulated Learning: Six Models and Four Directions for Research. *Frontiers in Psychology*.
  - This review article provides a comprehensive overview of different SRL models and identifies key areas for future research.
- Winne, P., & Perry, N. E. (2000). Measuring Self-Regulated Learning. *Handbook of Self-Regulation of Learning and Performance* (pp. 531-566). Routledge.
  - This chapter discusses various approaches to measuring SRL and highlights the importance of valid and reliable assessment tools.

## PART 4: DEVELOPMENT OF THE SCALES, ITEMS, AND FIELD TESTING

In this section, and in subsequent sections focusing on the psychometric properties of the SLA-HS, we will use the term “scales” to refer to the 11 key learning areas assessed by the instrument. This choice is consistent with standard psychometric terminology and facilitates clear communication in technical discussions of scale development, reliability, and validity. In other sections of the manual, we use the more user-friendly term “learning areas” to emphasize the focus on student learning and development.

### SELECTION OF THE SCALE CONSTRUCTS

The development of the SLA-HS began with a thorough review of relevant peer-reviewed and non-peer-reviewed literature (e.g., academic articles, books, podcasts, etc.) to identify the most critical skills and strategies associated with academic success in high school. This review led to the creation of a matrix of 21 potential competency areas for inclusion in the self-assessment. A panel of experts in educational psychology and learning evaluated these competencies based on three primary criteria:

- **Prevalence in the literature:** The extent to which the competency was identified as essential for high school success.
- **Trainability:** Whether the competency could be effectively taught or developed through intervention.
- **Measurability:** The clarity with which the competency could be defined and measured in a self-assessment format.

Through this rigorous evaluation process, the initial list of 21 competencies was refined to the 11 core scales included in the SLA-HS. This selection ensures that the SLA-HS focuses on the most impactful and actionable factors influencing student learning.

### ITEM CONSTRUCTION

Following the selection of the 11 scale constructs, we developed a comprehensive pool of items for each scale, generating up to 24 items per scale. These items underwent multiple

rounds of refinement and review by experts in the field. Experts were provided with an introduction to the SLA-HS and asked to evaluate each item based on the following criteria:

- **Clarity and understandability:** Is the item worded clearly and easy for students to understand?
- **Potential for misinterpretation:** Could the item be misinterpreted or lead to ambiguous responses?
- **Construct validity:** Does the item accurately reflect the construct it is intended to measure?

This feedback was invaluable in ensuring the clarity, face validity, and overall quality of the items. Items were further scrutinized to eliminate those exhibiting:

- **Affirmation bias:** The tendency for respondents to agree with statements regardless of their content.
- **Double-barreled structure:** Items that assess two different concepts simultaneously.
- **Confusing or unclear wording:** Items that were difficult to understand or interpret.

This meticulous process resulted in a refined pool of 9 items per scale. A field test version of the SLA-HS, comprising 99 items (including demographic questions), was then developed. Throughout this process, maintaining strong psychometric properties for the final SLA-HS instrument remained a priority.

## ITEM SCORING

In developing the SLA-HS item scoring system, we considered both five- and seven-point Likert scales. Consultation with psychometric experts and a review of relevant literature led us to choose a five-point scale for the following reasons:

- **Clarity for respondents:** A five-point scale is more intuitive and easier for students to understand.
- **Simplified response options:** Reduces cognitive load and potential confusion for respondents.
- **Efficient administration:** Minimizes the time required to complete the assessment.

The five-point scale utilizes the following response options and corresponding values:

**Positively worded items:**

- 1 = Almost never like me
- 2 = Occasionally like me
- 3 = Moderately like me
- 4 = Quite a bit like me
- 5 = Almost always like me

**Negatively worded items:**

- 5 = Almost never like me
- 4 = Occasionally like me
- 3 = Moderately like me
- 2 = Quite a bit like me
- 1 = Almost always like me

To mitigate response bias, approximately 20% of the items are negatively worded. This helps to identify respondents who may be exhibiting acquiescence bias (a tendency to agree with all items) or nay-saying bias (a tendency to disagree with all items). By incorporating negatively worded items, we encourage more thoughtful and accurate responses, ultimately enhancing the validity of the assessment results.

## FIELD TESTING

To ensure the SLA-HS is applicable to a wide range of student populations, the field test version was administered online to a diverse sample of 256 students across the United States and Pacific Rim. Participants were recruited from various geographic regions and included representation from public schools, private schools, and TRIO programs. The sample also demonstrated diversity in terms of age, grade level, gender, and race/ethnicity, further strengthening the generalizability of the findings and ensuring the SLA-HS is relevant and useful for a broad spectrum of high school students (see Appendix A, Tables 1-7).

The field test data was analyzed using both conceptual and psychometric methods. This involved a multi-faceted approach that included evaluating the content validity of the items, assessing the internal consistency of the scales, and examining the relationships between the scales:

- **Evaluating the content validity of the items:** We examined whether the items accurately reflected the intended constructs and covered the full breadth of each scale.
- **Assessing the internal consistency of the scales:** We used Cronbach's alpha to determine how reliably the items within each scale measured the same underlying construct.
- **Examining the relationships between the scales:** We explored how the different scales correlated with each other, providing insights into the relationships between various learning strategies and skills.

Based on these analyses, the final version of the SLA was refined to include 11 scales, each consisting of 5 items that best represented the underlying construct and demonstrated strong psychometric properties.

## PART 5: RELIABILITY, VALIDITY, AND SCORING

### RELIABILITY AND VALIDITY

The reliability of an assessment refers to its consistency in measuring a particular construct. A reliable instrument produces similar results under consistent conditions. The SLA-HS's reliability is evaluated using Cronbach's alpha, a statistical measure of internal consistency that assesses how closely related a set of items are as a group.

Validity refers to the extent to which an assessment accurately measures what it is intended to measure. Establishing validity for constructs like those in the SLA-HS requires a multifaceted approach. One key aspect is face validity, which is determined by expert judgment. We engaged educational psychologists and learning specialists to review the SLA-HS items and confirm that they accurately reflect the intended constructs.

#### Balancing Reliability and Validity

While adding more items to a scale can generally increase reliability (as measured by Cronbach's alpha), it also increases testing time and potential student fatigue, which can negatively impact the validity of the results. Furthermore, solely focusing on maximizing alpha can lead to a narrow selection of items that may not fully represent the complexity of the construct being measured. For example, solely maximizing alpha for the Communication scale might lead to over-representing items related to public speaking while neglecting other key aspects like active listening, written communication, and non-verbal cues. This narrow focus could result in a scale that is internally consistent but fails to capture the full complexity of effective communication.

Therefore, we aimed for a balance between brevity and reliability, targeting five items per scale. During development, we used Cronbach's alpha to refine the item pool, ensuring that each scale demonstrated strong internal consistency while maintaining adequate content coverage and representing the breadth and depth of each learning skill. This approach ensures that the SLA-HS is both reliable and valid, providing a meaningful and comprehensive assessment of students' strategic learning abilities.

Summaries of the item statistics for each scale can be found in Appendix B, Tables 8-18. Appendix C, Table 19 presents scale statistics (mean, standard deviation, and Coefficient Alpha) for each of the 11 scales.

## Other Forms of Validity

Beyond face validity, we examined several other forms of validity evidence to ensure the SLA-HS accurately measures the intended constructs.

- **Content Validity:** A thorough review of the item statistics (Appendix B, Tables 8-18) confirmed that each item on the SLA-HS contributes meaningfully to its respective scale, indicating strong content validity.
- **External Validity:** The diverse sample used in the field test, representing a variety of student demographics and institutional types, enhances the external validity of the SLA-HS, supporting its generalizability to a wider high school population.
- **User Validity:** Feedback from educators, counselors, and advisors who participated in the scale development and refinement process has been overwhelmingly positive, indicating high user validity and the SLA-HS's practical value in educational settings.
- **Construct Validity:** The scale statistics (Appendix C, Table 19) demonstrate that each of the 11 SLA-HS scales exhibits acceptable internal consistency (Cronbach's alpha), further supporting the construct validity of the instrument. Additionally, the correlations among the scales (Appendix D, Table 20) provide insights into the relationships between the different learning strategies and skills measured by the SLA-HS.

While these findings provide strong initial support for the validity of the SLA-HS, we recognize that validity is an ongoing process. Future research will focus on gathering additional evidence of predictive validity by examining the relationship between SLA-HS scores and long-term academic outcomes, such as GPA, retention, and graduation rates. We will also explore convergent and discriminant validity by comparing SLA-HS scores to scores on other established measures of learning strategies and academic skills.

## SCORING THE SLA-HS

The SLA-HS employs a criterion-referenced scoring approach to provide students with meaningful feedback that fosters self-regulated learning and academic success. This deliberate choice reflects the unique developmental needs and educational goals of high school students.



## Criterion-Referenced Scoring

Criterion-referenced scoring evaluates a student's performance relative to predefined standards or criteria, rather than comparing them to other students. In the context of the SLA-HS, this means that students receive feedback on their mastery of specific learning skills and strategies, independent of how their peers perform.

## Why Criterion-Referenced Scoring for High School Students?

1. **Promoting Self-Reflection and Growth:** High school is a critical period for developing self-awareness and a sense of agency. Criterion-referenced scoring encourages students to focus on their own strengths and areas for improvement, fostering a growth mindset and a sense of ownership over their learning.
2. **Enhancing Motivation and Goal Setting:** By providing clear criteria and performance levels ("Developing," "Emerging," and "Thriving"), the SLA-HS empowers students to set specific, achievable goals for improvement. This approach promotes intrinsic motivation and encourages students to actively engage in their learning process.
3. **Providing Actionable Feedback:** Criterion-referenced scoring facilitates targeted feedback and intervention. Educators can identify specific areas where a student needs support and provide tailored recommendations and resources. This personalized guidance is essential for helping students develop the critical skills measured by the SLA-HS.
4. **Supporting Developmental Needs:** Adolescence is a time of significant social comparison and self-consciousness. Norm-referenced scoring, which emphasizes how students compare to others, can be counterproductive during this stage. Criterion-referenced scoring offers a more supportive and encouraging framework for development, focusing on individual progress and mastery.

## The SLA-HS Scoring Process:

- **Numerical Values:** Each response on the SLA-HS is assigned a numerical value.
- **Summative Scores:** Scores are summed for each of the 11 scales.
- **Cut-off Scores:** Experts in education and psychometrics have established cut-off scores that define the "Developing," "Emerging," and "Thriving" levels for each scale. These cut-offs reflect the knowledge and skills expected of high school students.

- **Feedback:** Students receive a Profile Report that indicates their performance level for each scale, along with specific recommendations and resources for improvement.

In contrast, the college version of the SLA utilizes norm-referenced scoring (percentiles) to provide students with a comparative perspective on their skills and to aid in institutional decision-making.

By employing criterion-referenced scoring, the SLA-HS prioritizes individual growth, mastery, and self-regulated learning. This approach empowers high school students to take ownership of their educational journey and develop the essential skills needed for success in academics and beyond.

## Score Ranges and Designations

Since we are using a 5-point Likert scale for each item, and each scale has 5 items, the theoretical range of possible scores for the 11 scales is 5 (1 x 5) to 25 (5 x 5). Scores are identified with the following designations:

- **Developing (5-11):** Indicates that the student is still developing fundamental skills and knowledge in this area. Students with scores in this range likely require additional support and targeted interventions to strengthen their abilities.
- **Emerging (12-18):** Suggests a good foundation and emerging proficiency. Students are demonstrating progress but can benefit from further skill refinement and targeted strategies.
- **Thriving (19-25):** Signifies a strong command of the skills and knowledge in this area. The student is well-equipped for academic success and can leverage these strengths for further growth. Even students with scores in this range can benefit from ongoing development and refinement.

## Using the Designations

These designations provide a framework for understanding individual student needs and informing targeted interventions. For example, a student with a “Developing” designation in Effective Learning Strategies may benefit from explicit instruction in study techniques, metacognitive strategies, and self-regulated learning practices.

### Points to Consider:

- These designations are not intended to label students but to provide insights into their current skill levels.
- Learning is a dynamic process, and students can progress through these designations with appropriate support and guidance.
- Use the SLA-HS results in conjunction with other information about the student to develop a holistic understanding of their learning needs.

By effectively interpreting SLA-HS results, educators can create targeted interventions, differentiate instruction, and foster a learning environment where all students can thrive.

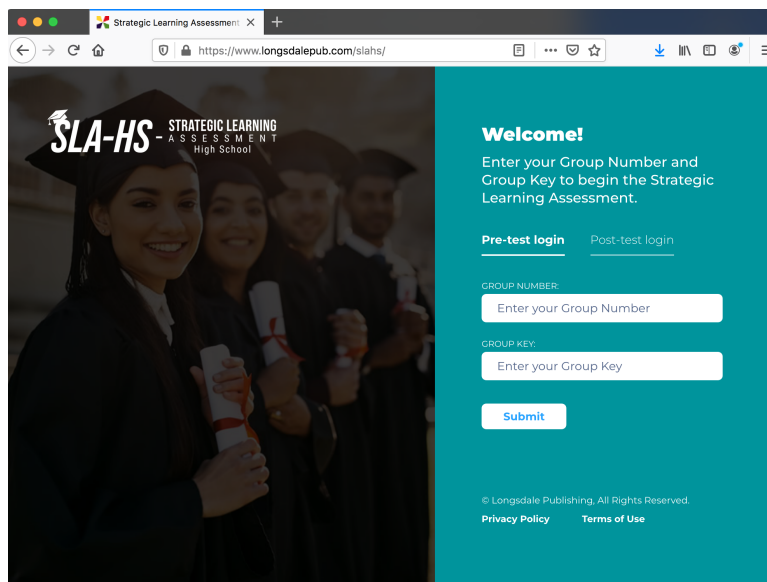
## PART 6: ADMINISTRATION INSTRUCTIONS

This section will guide you through the process of administering the SLA-HS.

### ADMINISTERING THE SLA-HS

Figure 2

The SLA-HS is administered online and requires an internet connection and a web browser. The user interface is designed for ease of use and works well on desktop and mobile devices. There are no plug-ins, extensions, or other software required. Upon placing an order for the SLA-HS, you will receive email instructions for the student in PDF format. The instructions direct the student to an introductory page similar to Figure 2. If this is the first

The image is a screenshot of a web browser displaying the SLA-HS (Strategic Learning Assessment - High School) introductory page. The browser's address bar shows the URL 'https://www.longsdalepub.com/slahs/'. The page features a dark blue header with the 'SLA-HS' logo and the text 'STRATEGIC LEARNING ASSESSMENT High School'. Below the header, there is a large image of three students in graduation gowns and caps. To the right of the image, a teal sidebar contains the following content: a 'Welcome!' message, instructions to 'Enter your Group Number and Group Key to begin the Strategic Learning Assessment.', two tabs for 'Pre-test login' (selected) and 'Post-test login', input fields for 'GROUP NUMBER' and 'GROUP KEY' with placeholder text 'Enter your Group Number' and 'Enter your Group Key' respectively, a 'Submit' button, and a footer with copyright information '© Longsdale Publishing. All Rights Reserved.' and links for 'Privacy Policy' and 'Terms of Use'.

time taking the SLA-HS, enter the Group Number and Group Key and select the “Submit” button to continue. If the student is returning to take a post-test, enter a Group Number and Post-Test Code after selecting the “Post-test login” link (Figure 4). The Post-Test Code is unique for each student and is printed on the SLA-HS Student Profile Report each student receives at the conclusion of the pre-test. Administrators can view a list of post-test codes at the Administrative site (Figure 14).

### WHO CAN ADMINISTER THE SLA-HS?

One of the advantages of the SLA-HS is its ease of administration. Unlike many other assessments used in higher education, the SLA-HS does not require specialized certification or training for administration. Faculty, advisors, and student support staff can readily integrate the SLA-HS into their existing practices without needing to invest time and resources in additional qualifications. This accessibility makes the SLA-HS a practical and efficient tool for gaining valuable insights into student learning strategies and providing targeted support.

## PRE-TEST

Upon entering a Group Number and Group Key and clicking the “Submit” button, the student will be directed to a page similar to Figure 3. This page requires the student to enter a first and last name, and an email address. Click the “Continue” button to proceed.

Note: An ID Number field can be added to this page. Contact your SLA-HS support representative to request this option for your account.

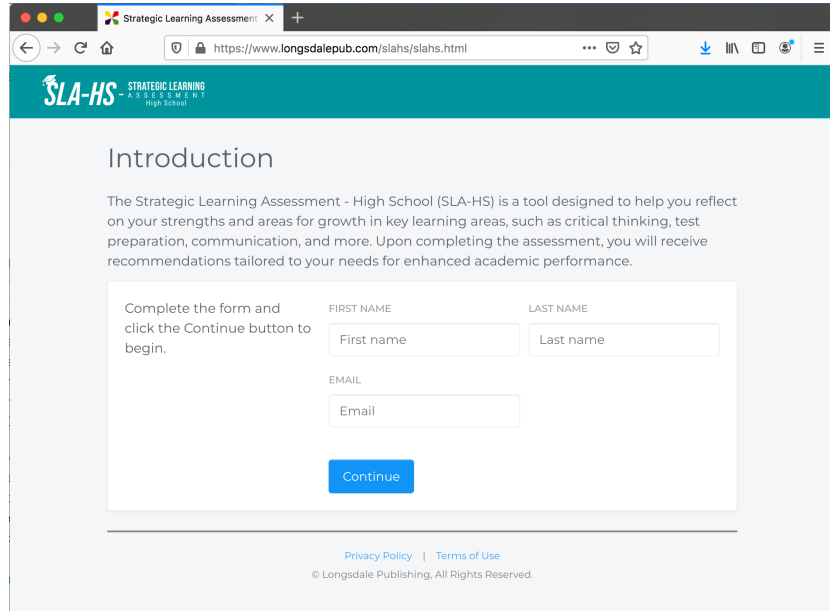
A screenshot of a web browser showing the SLA-HS (Strategic Learning Assessment - High School) introduction page. The page has a teal header with the SLA-HS logo. Below the header, the title "Introduction" is centered. A paragraph explains that the tool is designed to help students reflect on their strengths and areas for growth. Below this, there is a form with the instruction "Complete the form and click the Continue button to begin." The form contains three input fields: "FIRST NAME" (with a placeholder "First name"), "LAST NAME" (with a placeholder "Last name"), and "EMAIL" (with a placeholder "Email"). A blue "Continue" button is positioned below the email field. At the bottom of the page, there are links for "Privacy Policy" and "Terms of Use", and a copyright notice: "© Longsdale Publishing, All Rights Reserved."

Figure 3

## OPTIONAL POST-TEST

If the student enters a Group Number and a valid Post-Test Code into the Post-test login fields (Figure 4), the next screen to appear will be the post-test SLA-HS (Figure 6). Students who wish to receive their Post-Test Code can provide the same email address used during the Pre-Test. The code will be sent to that address (Figure 5). Using the Post-test login fields will assure the student’s pre-test and post-test records are linked in the system.

Figure 4

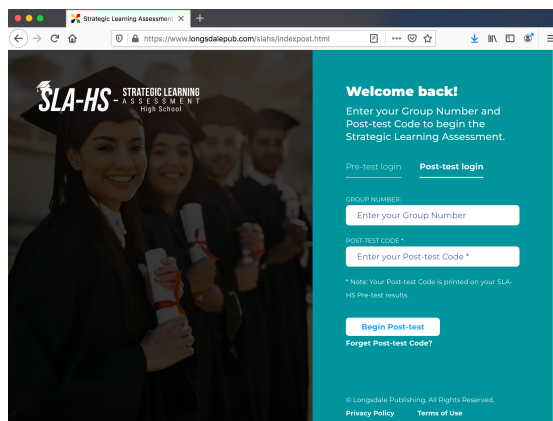
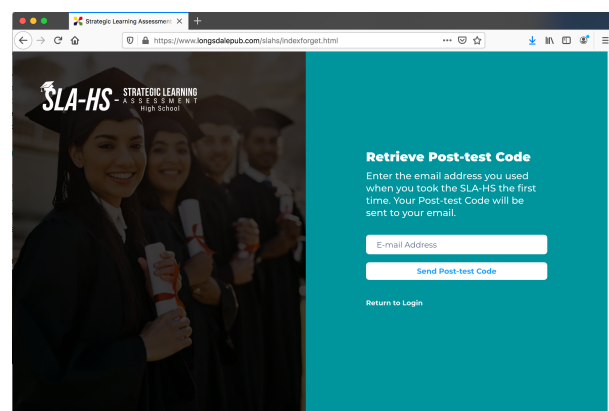
A screenshot of the SLA-HS post-test login page. The page features a teal background with a photo of students in graduation gowns on the left. The main content area is white and contains the heading "Welcome back!" followed by the instruction "Enter your Group Number and Post-test Code to begin the Strategic Learning Assessment." There are two input fields: "Group Number" and "Post-test code \*". A note below the fields states: "\*Note: Your Post-test Code is printed on your SLA-HS Pre-test results." Below the fields is a blue "Begin Post-test" button and a link "Forgot Post-test Code?". At the bottom, there are links for "Privacy Policy" and "Terms of Use", and a copyright notice: "© Longsdale Publishing, All Rights Reserved."

Figure 5

A screenshot of the SLA-HS "Retrieve Post-test Code" page. The page has a teal background with a photo of students in graduation gowns on the left. The main content area is white and contains the heading "Retrieve Post-test Code" followed by the instruction "Enter the email address you used when you took the SLA-HS the first time. Your Post-test Code will be sent to your email." There is an "E-mail Address" input field and a blue "Send Post-test Code" button. Below the button is a link "Return to Login". At the bottom, there are links for "Privacy Policy" and "Terms of Use", and a copyright notice: "© Longsdale Publishing, All Rights Reserved."

## SLA-HS ITEMS

Figure 6

The next screen to appear (Figure 6) 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, select the blue button labeled “Review what is meant by each of the five responses.” A summary is shown below.

- By **Almost never like 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 **Occasionally like me**, we mean that the statement generally would not be true of you.
- By **Moderately like me**, we mean that the statement would be true of you about half the time.
- By **Quite a bit like me**, we mean that the statement would generally be true of you.
- By **Almost always like 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.

The screenshot shows a web browser window with the title "Strategic Learning Assessment". The address bar shows the URL "https://www.longsdalepub.com". The page header features the "SLA-HS" logo and the text "STRATEGIC LEARNING ASSESSMENT High School".

**Directions**

Select responses according to how well each statement describes you. There are no right or wrong answers. If you would like to review the meaning of each response option (e.g., Almost never like me, Occasionally like me, etc.), click the blue button below.

[Review what is meant by each of the five responses.](#)

**1. I make time for doing things that are relaxing when I feel stressed.**

☐ Almost never like me  
☐ Occasionally like me  
☐ Moderately like me  
☐ Quite a bit like me  
☐ Almost always like me

**2. If I struggle to focus, I know what to do to get myself back on track.**

☐ Almost never like me  
☐ Occasionally like me  
☐ Moderately like me  
☐ Quite a bit like me  
☐ Almost always like me

**3. When faced with a hard problem, I break it down into smaller, more manageable parts to figure it out.**

☐ Almost never like me  
☐ Occasionally like me  
☐ Moderately like me  
☐ Quite a bit like me  
☐ Almost always like me

Although there is no time limit, it is estimated that it will take about 20 minutes to complete all items.

## STUDENT PROFILE REPORT

Figure 7

Once a student completes all of the items, a detailed report will be automatically generated. This report provides a detailed breakdown of the student's performance, including percentile scores for each of the 11 skill areas. In addition to scores, the report offers personalized feedback and practical strategies for improvement in each skill area. A sample Student Profile is shown in Figure 7. A link to this report will also be emailed to the student for easy access.

Note: Administrators have two options for managing student access to the profile report:

- **No Results Version:** To prevent students from receiving a profile report, administrators can request the 'No Results Version' of the assessment. This version still allows students to complete the assessment, but no report will be generated or sent to them. However, a copy of the student profile report will still be saved to the Administrative Dashboard for administrator access.
- **Custom Message:** Alternatively, administrators can choose to display a custom message to students instead of the standard report. This allows for personalized communication or redirection to other resources.

To enable either of these options, please contact your support representative.



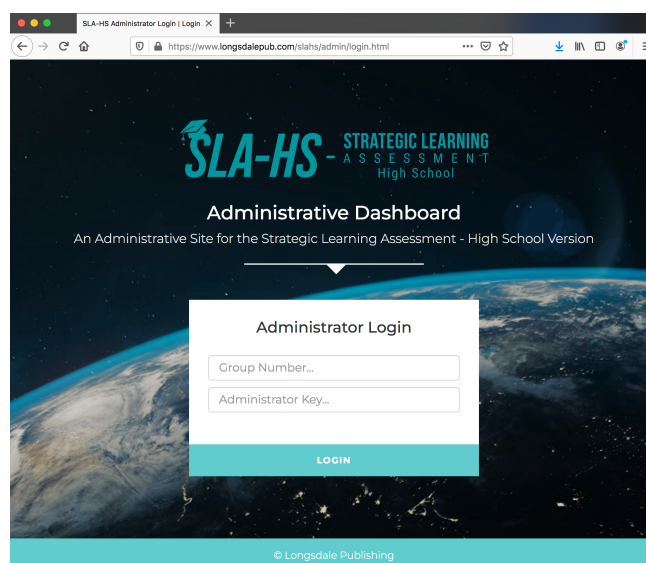
## ADMINISTRATIVE DASHBOARD

Administrators have access to a variety of tools and reports to manage your institution's account and review student data. To access these features, please refer to the Administrator Instruction PDF emailed to the administrator overseeing the SLA-HS account. The Administrator Instruction sheet contains sensitive information intended solely for the administrator. Please do not copy or distribute this document to students or other unauthorized individuals.

The following information is available to administrators through the Administrative Dashboard:

- The **SLA-HS Records** tab allows you to search for individual students and displays a report of the following results:
  - Student Name, Email, Administration Date, and 11 Scale Scores,
  - A link to the student's original SLA-HS profile report,
  - A link to a report that details how the student responded to all SLA-HS items, and
  - For students who have taken both the pre- and post-tests, a link to an instructor/advisor report with a side-by-side comparison of their responses on both tests.
- The **Post-Test Codes** tab shows a list of post-test codes for each student who has taken the pre-test of the SLA-HS. A post-test code is required to take the post-test.
- The **Raw Data** tab allows you to download an Excel file of your school's raw data. The file includes each student's name, email, post-test code, test date/time, 11 scale scores, and all item scores.
- The **Account Status** tab shows how many administrations your institution was issued, the date they were issued, and the number remaining to be used.

Figure 8

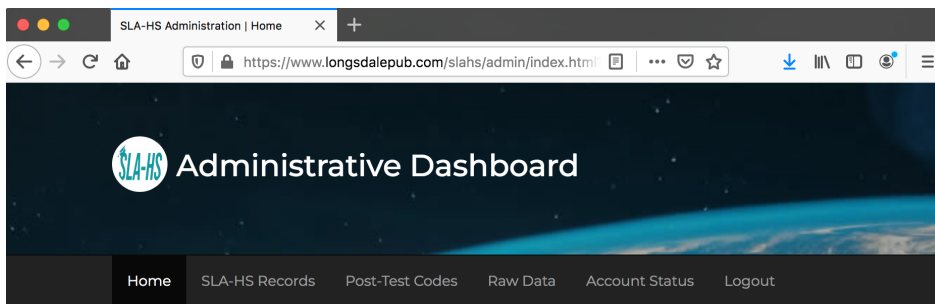




## HOME PAGE

The home page of the SLA-HS Administrative Dashboard is shown in Figure 9. Navigate the site using the tabs at the top of the page.

Figure 9



### Dashboard Features

The menu tabs at the top of the screen provide access to the following features:

- **Home:** A quick overview of the dashboard and its functionalities.
- **SLA-HS Records:** Access detailed reports for individual students, including:
  - **SLA-HS Student Report:** View individual student scores, scale interpretations, and personalized recommendations.
  - **Item Responses:** Review student(s) responses to all SLA-HS items.
  - **Pre- and Post-Test Comparison (for students who have taken the assessment twice):** Compare student(s) responses on the pre- and post-tests side-by-side.
- **Post-Test Codes:** Search for post-test codes for each student who has taken the SLA-HS pre-test. A Post-Test Code is required to take the post-test.
- **Raw Data:** Download an Excel or SPSS file containing your group's raw data, including student names, email addresses, post-test codes, administration date and time, 11 scale scores, and individual item responses.
- **Account Status:** View the number of administrations remaining in your account.
- **Logout:** Sign out of the dashboard.

#### SLA-HS User's Manual

The [SLA-HS User's Manual](#) includes a history of the assessment's development, a complete description of the 11 key learning areas, a section on administration and scoring, results of pilot and field testing, and the process used in scale construction.

#### Need More Administrations?

To order additional administrations, please visit our [online store](#), call us at (727) 389-8026, or send us an [email](#). When reordering, note your **Group Number (#####)** so we can update your account.

## SEARCH RECORDS

Figure 10

The page to the right (Figure 10) appears after selecting the “SLA-HS Records” tab. Click the “Search Records” button without selecting any search parameters to find a list of all students in your account. Use the fields to refine your search and return fewer records.

The screenshot shows the SLA-HS Administrative Dashboard with the "SLA-HS Records" tab selected. The form includes fields for First Name, Last Name, Pre-Test Date (From and To), and Sort by. A "Search Records" button is at the bottom right.

SLA-HS Administrative Dashboard

Home SLA-HS Records Post-Test Codes Raw Data Account Status Logout

**SLA-HS Records**

Click the "Search Records" button to view the records for all students in your group, or narrow your search by using the First Name, Last Name, Date, and Sort options.

First Name contains [ ]

Last Name contains [ ]

Pre-Test Date From Jan 1 2025 To Dec 31 2025

Sort by None

Search Records

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Figure 11

SLA-HS Administration | Search Results

https://www.longsdalepub.com/slahs/admin/results\_slahs/searchResults

SLA-HS

Administrative Dashboard

Home

SLA-HS Records

Post-Test Codes

Raw Data

Account Status

Logout

SLA-HS Records

The records shown below display the results of your search. Additional reports are available for each student. To view a Student's Profile or Item Responses, click on the blue "View" link. If a student has taken a pre- and post-test, click on the "Instructor/Advisor Report" link.

Displaying records 1 - 1 from 1\* student (17 total records in group).

Student, Joe	joe.classmate@school.k12.us										Grade: 10		
	Scores											Student Profile	Item Responses
	COMM	CRIT	EFLS	FOCS	GROW	PERS	SEEK	SENS	STRS	TEST	TIME		
	04/17/25	9	16	19	11	18	20	17	6	13	19		
04/19/25	19	20	22	22	19	22	19	20	24	22	21	<a href="#">View</a>	<a href="#">View</a>

Instructor/Advisor Report

Displaying records 1 - 1 from 1\* student (17 total records in group).

\* Note: This number reflects the total number of students in your group not the total of both pre- and post-tests.

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Figure 11 shows the results of a search query. Both pre- and post-test results are shown in the figure. To view a Student Profile Report or Item Responses Report, click the “View” link. A Profile Report is similar to Figure 7.

## ITEM RESPONSE REPORT

Figure 12

A sample Item Responses Report is shown in Figure 12. The Item Responses Report groups the SLA-HS items by scale. All the items that make up the 11 scales along with how the student responded to each item 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.

The screenshot shows a web browser displaying the 'SLA-HS | Strategic Learning Assessment - High School' Item Responses report. The header includes the student's name 'Joe Classmate', grade '10', and email 'joe.classmate@school.k12.us'. The report is organized into three sections, each with a table of item scores. The first section is the 'Communication (COMM) Scale' with a score of 9, showing items 3, 1, 1, 2, and 2. The second section is the 'Critical Thinking (CRIT) Scale' with a score of 16, showing items 3, 2, 3, 4, and 4. The third section is the 'Effective Learning Strategies (EFLS) Scale' with a score of 19, showing item 4. Each item is followed by its corresponding statement.

SLA-HS   Strategic Learning Assessment - High School		
Item Responses		
Joe Classmate Grade: 10 04/17/25	Group Number: 300050 joe.classmate@school.k12.us	
<b>Item Scores</b> (1 lowest - 5 highest)		
<b>Communication (COMM) Scale</b> <span>Scale Score = 9</span>		
3	10.	I can clearly explain my ideas in writing.
1	21.	I feel comfortable speaking up in class discussions.
1	32.	I avoid public speaking whenever possible.
2	43.	I can easily engage in conversations with people I don't know well.
2	54.	I am comfortable starting conversations with classmates.
<b>Item Scores</b> (1 lowest - 5 highest)		
<b>Critical Thinking (CRIT) Scale</b> <span>Scale Score = 16</span>		
3	3.	When faced with a hard problem, I break it down into smaller, more manageable parts to figure it out.
2	14.	I challenge my own beliefs when presented with new information.
3	25.	I make sure that information I learn from the internet is from a reliable source before accepting it as true.
4	36.	When presented with an argument on a topic, I consider the evidence before forming my own opinion.
4	47.	I try to figure out if something I read is a fact or just someone's opinion.
<b>Item Scores</b> (1 lowest - 5 highest)		
<b>Effective Learning Strategies (EFLS) Scale</b> <span>Scale Score = 19</span>		
4	11.	I get lost in the details during lectures and miss the main points.

Figure 13

The screenshot shows a web browser displaying the 'SLA-HS | Strategic Learning Assessment - High School' Instructor/Advisor Report. The header includes the student's name 'Joe Classmate', grade '10', and email 'joe.classmate@school.k12.us'. The report provides a pre- and post-test score analysis. The first table, 'Pre/Post-Test Score Comparison', shows scores for 11 scales. The second table, 'Pre/Post-Test Individual Item Comparison', shows individual item scores for the Communication (COMM) and Critical Thinking (CRIT) scales.

SLA-HS   Strategic Learning Assessment - High School			
Instructor/Advisor Report			
Joe Classmate Grade: 10 joe.classmate@school.k12.us	Group Number: 300050 Pre-Test Date: 04/17/25 Post-Test Date: 04/19/25		
This report provides pre- and post-test SLA-HS score analysis. The first table shows the Pre/Post-Test Score Comparison as well as the percentage of change in scale scores. The second half of the report shows individual item responses on both the pre- and post-tests.			
<b>Pre/Post-Test Score Comparison</b>			
Scale	Pre-Test Scale Score	Post-Test Scale Score	% Change in Score
Communication	9	19	+111%
Critical Thinking	16	20	+25%
Effective Learning Strategies	19	22	+16%
Focus and Concentration	11	22	+100%
Growth Mindset	18	19	+6%
Persistence	20	22	+10%
Seeking Help	17	19	+12%
Sense of Belonging	6	20	+233%
Stress Management	13	24	+85%
Test Preparation	19	22	+16%
Time Management	8	21	+162%
<b>Pre/Post-Test Individual Item Comparison</b>			
Pre-Test Item Score	Post-Test Item Score	Communication (COMM) Scale	
3	5	10. I can clearly explain my ideas in writing.	
1	3	21. I feel comfortable speaking up in class discussions.	
1	4	32. I avoid public speaking whenever possible.	
2	4	43. I can easily engage in conversations with people I don't know well.	
2	3	54. I am comfortable starting conversations with classmates.	
(1 lowest - 5 highest)			
Pre-Test Item Score	Post-Test Item Score	Critical Thinking (CRIT) Scale	
3	4	3. When faced with a hard problem, I break it down into smaller, more manageable parts to figure it out.	

## INSTRUCTOR/ADVISOR REPORT

An “Instructor/Advisor Report” is shown in Figure 13. This report displays 11 scale scores, and the percentage change in raw score from pre- to post-test. Individual item responses for both pre- and post-test are also shown.

## POST-TEST CODES

The page to the right (Figure 14) appears after selecting the “Post-Test Codes” tab. Post-Test Codes are unique and generated upon completion of a pre-test. Students will use a Post-Test Code along with a Group Number to take a post-test. (See Post-Test login in Figure 4). While Post-Test Codes are included on each student’s Profile Report (Figure 7), you may find it helpful to have a list available for students who do not have their code immediately available.

Figure 14

**Post-Test Codes**

The report shows the Post-Test Codes for each student who has taken the pre-test of the SLA. A Post-Test Code is required to take the post-test. If no Post-Test Code is shown next to a student name, the student has already taken a post-test.

Displaying records **1 - 9** of **9** total records.

Longdale Test School		Group Number: 300050	
Name	Email	Post-Test Code	Test Date
Classmate2, Caleb	caleb.classmate2@school.k12.us	Ea74vw7J	04/16/25
Classmate4, Dylan	dylan.classmate4@school.k12.us	Ea23ak3M	04/17/25
Classmate3, Kai	kai.classmate3@school.k12.us	**	04/16/25
Classmate6, Jada	jada.classmate6@school.k12.us	CI5Scr6B	04/17/25
Classmate5, Samantha	samantha.classmate5@school.k12.us	t26Ct4p	04/17/25
Classmate, Joe	joe.classmate@school.k12.us	**	04/17/25
Classmate10, Mike	mike.classmate10@school.k12.us	Ea6y3M	04/17/25
Classmate8, Jamila	jamila.classmate8@school.k12.us	Ea6q3M	04/17/25
Classmate7, Rachel	rachel.classmate7@school.k12.us	sd6T6s	04/17/25

\*\*Note: Individual has already used a Post-Test Code to take a post-test.

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## RAW DATA

The Raw Data tab allows you to download a file of your school's raw data (Figure 15). The file includes each student's name, email, post-test codes, test date/time, 11 scale scores, and all item scores. The file can be opened with Excel, SPSS, or any other spreadsheet or data-analysis program.

Figure 15

The screenshot shows a web browser window with the URL <https://www.longsdalepub.com/slahs/admin>. The page title is "SLA-HS Administration | Download". The dashboard header includes the SLA-HS logo and the text "Administrative Dashboard". The navigation menu has links for Home, SLA-HS Records, Post-Test Codes, Raw Data, Account Status, and Logout. The "Raw Data" tab is selected. Below the navigation menu is a section titled "Download SLA-HS Data" with a light green header. The text below the header reads: "Use this page to save a tab delimited file containing your group's raw data. The downloaded file can be opened with Excel, SPSS, or any other spreadsheet or data-analysis program." The form contains the following fields: "First Name" with a dropdown menu set to "contains" and an adjacent text input field; "Last Name" with a dropdown menu set to "contains" and an adjacent text input field; "Pre-Test Date" with a "From" section containing month (Jan), day (1), and year (2025) dropdowns, and a "To" section containing month (Dec), day (31), and year (2025) dropdowns; and "Sort by" with a dropdown menu set to "None". A blue "Download Data" button is located to the right of the "Sort by" dropdown. At the bottom of the page is a teal footer bar with the text "© Longsdale Publishing".

## ACCOUNT STATUS

The page to the right (Figure 16) appears after selecting the "Account Status" tab. The account status relates the number of administrations remaining in your account. Unused administrations do not expire. When reordering, note your Group Number so a customer service representative can add new administrations to your existing account.

Figure 16

The screenshot shows a web browser window with the URL <https://www.longsdalepub.com/slahs/admin>. The page title is "SLA-HS Administration | Account Status". The dashboard header includes the SLA-HS logo and the text "Administrative Dashboard". The navigation menu has links for Home, SLA-HS Records, Post-Test Codes, Raw Data, Account Status, and Logout. The "Account Status" tab is selected. Below the navigation menu is a section titled "Account Status" with a light green header. The text below the header reads: "There are 88 administrations remaining to be used in your account. To order additional administrations, please call Longsdale Publishing at (727) 389-8026, send us an [email](#), or visit our [online store](#). Orders are processed within 24-48 hours. When reordering note your **Group Number (#####)**, so we can update your account." Below this text is a line: "Even after all your administrations are used, you may continue to view the results." At the bottom of the page is a teal footer bar with the text "© Longsdale Publishing".

## APPENDIX A: FIELD TEST DEMOGRAPHICS (TABLES 1-7)

Table 1: Sample Size by Type of Institution				
	Schools	%	Students	%
Public	5	63%	131	51%
Private	3	38%	125	49%
Total	8	100%	256	100%

Table 2: Sample Size by TRIO Program		
	Students	%
TRIO	200	78%
non-TRIO	56	22%
Total	256	100%

Table 3: Sample Size by Geographic Location		
	Number of Institutions	%
Midwest, U.S.	1	13%
Northeast, U.S.	2	25%
Northwest, U.S.	1	13%
Southeast, U.S.	2	25%
West, U.S.	1	13%
Pacific Rim, U.S. territory	1	13%
Total	8	100%

Table 4: Sample Size by Grade		
Grade	Students	%
8	9	3.5%
9	28	11%
10	76	30%
11	75	29%
12	66	26%
other	2	0.8%
Total	256	100%

Table 5: Sample Size by Age		
Age	Students	%
13 and under	2	0.8%
14	25	10%
15	52	20%
16	72	28%
17	70	27%
18	29	11%
19	3	1.2%
20 and over	1	0.4%
no answer	2	0.8%
Total	256	100%

Table 6: Sample Size by Gender		
	Students	%
Female	160	62.5%
Male	91	35.5%
Other	0	0.0%
Non-binary	1	0.4%
Prefer not to answer	4	1.6%
Total	256	100%

Table 7: Sample Size by Race/Ethnicity		
	Students	%
American Indian or Alaska Native	1	0.4%
Asian or Pacific Islander	57	22%
Black or African American	10	3.9%
Hispanic or Latino	7	2.7%
Multiple ethnicity	75	29%
Other	4	1.6%
Prefer not to say	6	2.3%
White or Caucasian	96	38%
Total	256	100%



## APPENDIX B: ITEM STATISTICS (TABLES 8-18)

**Table 8: Item Statistics for Communications Scale (COMM) (Coefficient Alpha = 0.71)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
10	3.30	1.090	0.317	0.718
21	2.96	1.250	0.549	0.631
32	2.56	1.350	0.465	0.668
43	2.88	1.260	0.535	0.637
54	3.53	1.240	0.487	0.658

**Table 9: Item Statistics for Critical Thinking Scale (CRIT) (Coefficient Alpha = 0.71)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
3	3.32	1.134	0.421	0.677
14	3.02	1.044	0.401	0.682
25	3.76	1.060	0.460	0.659
36	3.56	0.976	0.494	0.646
47	3.35	1.049	0.547	0.622

**Table 10: Item Statistics for Effective Learning Scale (EFLS) (Coefficient Alpha = 0.67)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
11	3.20	1.112	0.427	0.613
22	2.84	1.119	0.380	0.634
33	3.54	0.997	0.293	0.667
44	3.05	1.255	0.524	0.563
55	3.35	1.149	0.479	0.588

**Table 11: Item Statistics for Focus and Concentration Scale (FOCS) (Coefficient Alpha = 0.77)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
2	3.19	1.150	0.498	0.736
13	2.99	1.140	0.534	0.723
24	3.03	1.100	0.551	0.717
35	3.12	1.050	0.591	0.704
46	3.32	1.130	0.501	0.734

**Table 12: Item Statistics for Growth Mindset Scale (GROW) (Coefficient Alpha = 0.76)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
9	3.50	1.120	0.504	0.650
20	3.81	0.996	0.359	0.702
31	3.55	1.177	0.568	0.623
42	3.14	1.400	0.512	0.646
53	3.50	1.334	0.419	0.686

**Table 13: Item Statistics for Persistence Scale (PERS) (Coefficient Alpha = 0.76)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
8	3.64	1.040	0.581	0.694
19	3.98	0.980	0.590	0.693
30	3.56	1.050	0.493	0.725
41	4.09	1.120	0.430	0.749
52	3.48	1.100	0.542	0.707

**Table 14: Item Statistics for Seeking Help Scale (SEEK) (Coefficient Alpha = 0.71)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
4	3.50	1.120	0.504	0.650
15	3.81	0.996	0.359	0.702
26	3.55	1.177	0.568	0.623
37	3.14	1.400	0.512	0.646
48	3.50	1.334	0.419	0.686

**Table 15: Item Statistics for Sense of Belonging Scale (SENS) (Coefficient Alpha = 0.85)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
5	3.76	1.180	0.500	0.853
16	3.62	1.230	0.610	0.825
27	3.39	1.210	0.735	0.791
38	3.54	1.230	0.673	0.808
49	3.36	1.200	0.754	0.786

**Table 16: Item Statistics for Stress Management Scale (STRS) (Coefficient Alpha = 0.67)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
1	3.52	1.230	0.444	0.611
12	2.96	1.060	0.403	0.630
23	3.79	1.100	0.406	0.628
34	3.34	1.230	0.455	0.606
45	2.88	1.100	0.416	0.624

**Table 17: Item Statistics for Test Preparation Scale (TEST) (Coefficient Alpha = 0.76)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
7	3.15	1.200	0.520	0.720
18	2.96	1.370	0.536	0.715
29	2.44	1.230	0.650	0.674
40	2.84	1.320	0.492	0.730
51	3.18	1.230	0.452	0.743

**Table 18: Item Statistics for Time Management Scale (TIME) (Coefficient Alpha = 0.73)**

Item Number	Item Mean	Standard Deviation	Item-Total r Excluding This Item	Cronbach's Alpha if Item Deleted
6	2.55	1.330	0.523	0.674
17	2.70	1.030	0.480	0.693
28	2.71	1.200	0.422	0.712
39	3.32	1.160	0.586	0.650
50	2.78	1.250	0.467	0.696

## APPENDIX C: OVERALL SCALE STATISTICS

Scale Name	Scale Mean	Standard Deviation	Coefficient Alpha
Communications Scale (COMM)	15.23	4.218	0.71
Critical Thinking Scale (CRIT)	17.02	3.565	0.71
Effective Learning Scale (EFLS)	15.98	3.692	0.67
Focus and Concentration Scale (FOCS)	15.66	3.991	0.77
Growth Mindset Scale (GROW)	19.40	3.723	0.76
Persistence Scale (PERS)	18.75	3.768	0.76
Seeking Help Scale (SEEK)	17.50	4.128	0.71
Sense of Belonging Scale (SENS)	17.66	4.749	0.85
Stress Management Scale (STRS)	16.48	3.760	0.67
Test Preparation Scale (TEST)	14.58	4.534	0.76
Time Management Scale (TIME)	14.06	4.152	0.73

### Example: Interpreting the Test Preparation Scale Statistics

**Scale Mean (14.58):** The scale mean is the average score students obtained on the Test Preparation scale. Since we are using a 5-point Likert scale for each item, and the scale has 5 items, the theoretical range of possible scores is 5 ( $1 \times 5$ ) to 25 ( $5 \times 5$ ). A mean of 14.58 suggests that, on average, students demonstrate a moderate level of engagement in test preparation activities. The score falls roughly in the middle of the possible range (5 to 25), suggesting that there is room for improvement in test preparation practices.

**Standard Deviation (4.534):** The standard deviation statistic tells you how much variability there is in the scores. A higher standard deviation means that the scores are more spread out, while a lower standard deviation indicates that the scores are more clustered around the mean. With a standard deviation of 4.534, the scale exhibits a relatively wide spread of scores. This implies a greater degree of variability in test preparation behaviors among students. Some individuals may engage in extensive preparation, while others may require additional support or guidance to develop these skills.

**Coefficient Alpha (0.76):** The coefficient alpha is a measure of the internal consistency reliability of the scale. It tells you how closely related the 5 items are as a group. A coefficient alpha of 0.76 is considered acceptable, indicating that the 5 items are effectively measuring the same underlying construct of test preparation.

In summary, while students demonstrate a moderate level of engagement in test preparation, there is considerable variation in their practices. The reliable scale provides a solid foundation for further investigation into factors that may influence test preparation behaviors.

# APPENDIX D: SCALE INTERCORRELATIONS

	Communications COMM	Critical Thinking CRIT	Effective Learning Strategies EFLS	Focus and Concentration FOCS	Growth Mindset GROW	Persistence PERS	Seeking Help SEEK	Sense of Belonging SENS	Stress Management STRS	Test Preparation TEST	Time Management TIME
Communications (COMM)	1										
Critical Thinking (CRIT)	0.36	1									
Effective Learning Strategies (EFLS)	0.41	0.46	1								
Focus and Concentration (FOCS)	0.38	0.43	0.52	1							
Growth Mindset (GROW)	0.38	0.53	0.43	0.45	1						
Persistence (PERS)	0.35	0.49	0.46	0.62	0.63	1					
Seeking Help (SEEK)	0.46	0.26	0.36	0.34	0.36	0.43	1				
Sense of Belonging (SENS)	0.44	0.28	0.26	0.30	0.37	0.32	0.46	1			
Stress Management (STRS)	0.41	0.42	0.40	0.58	0.46	0.40	0.37	0.38	1		
Test Preparation (TEST)	0.27	0.46	0.44	0.48	0.40	0.57	0.33	0.13	0.25	1	
Time Management (TIME)	0.27	0.34	0.43	0.55	0.41	0.63	0.28	0.26	0.33	0.68	1

## Example 1 - Test Preparation and Time Management:

The result of the Pearson correlation shows that there was a high, positive correlation between TEST and TIME. The correlation between TEST and TIME was statistically significant,  $r(256) = 0.68$ ,  $p = <.001$ . The correlation coefficient indicates the strength and direction of the linear relationship between TEST and TIME. The coefficient 0.68 suggests a high, positive correlation. This means that, generally, as TEST increases, TIME also tends to increase and vice versa.

## Example 2 - Critical Thinking and Sense of Belonging:

The result of the Pearson correlation shows that there was a low, positive correlation between CRIT and SENS. The correlation between CRIT and SENS was statistically significant,  $r(256) = 0.28$ ,  $p = <.001$ . The correlation coefficient indicates the strength and direction of the linear relationship between CRIT and SENS. The coefficient 0.28 suggests a low, positive correlation. This means that, generally, as CRIT increases, SENS also tends to increase and vice versa.

**Note:** It's important to note that correlation does not imply causation, meaning that we cannot conclude that one variable influences or causes changes in the other.

Amount of $r$	Strength of Correlation
$0.0 < 0.1$	no correlation
$0.1 < 0.3$	low correlation
$0.3 < 0.5$	medium correlation
$0.5 < 0.7$	high correlation
$0.7 < 1$	very high correlation

## APPENDIX E: CRITERION-REFERENCED SCORING

Since the SLA-HS uses a 5-point Likert scale for each item, and each scale has 5 items, the theoretical range of possible scores for the 11 scales is 5 (1 x 5) to 25 (5 x 5).

Table 21: Criterion-Referenced Score Ranges and Designations	
	Raw Scale Score Range
Developing	5-11
Emerging	12-18
Thriving	19-25



# **Strategic Learning Assessment High School Version User's Manual**

by

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