Synapses, Students, and Synergies:
Applying the Science of Adolescent Learning to Policy and Practice

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ALLIANCE FOR EXCELLENT EDUCATION

SCIENCE OF ADOLESCENT LEARNING
at the Alliance for Excellent Education

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Executive Summary

During the next two school years, every state in the country must identify underperforming schools and create plans to support and improve them as required by the Every Student Succeeds Act (ESSA), the nation's main education law. Consequently, thousands of school districts and secondary schools[1] in the United States will have to make critical education decisions affecting adolescent learners. Despite federal legislative requirements for schools and districts to implement "evidence-based" solutions to improve student outcomes, there is no assurance that they will use the science of adolescent learning (SAL) to guide this crucial decisionmaking.

In brain development, increasingly meaningful cognition occurs as the number of synapses grows and these connections between neurons activate and strengthen.[2] Similarly, learning outcomes for millions of historically underserved adolescent learners depend on the activation of two sets of metaphorical synapses: (1) the ongoing connection between research, practice, and policy and (2) the process of applying research to practice and "brokering" the information with practitioners and policymakers to lead to adoption.

> "Rethinking education based on the science of learning affords the opportunity to look at the education of the whole child with the objective of rapidly improving the preparation of all children for success in life."
>
> **—Dan Leeds, Governing Board Chairman, Alliance for Excellent Education**

This paper reviews why adolescence is a critical period of development; examines why now is a moment of significant opportunity and challenge in education; and highlights how organizations, including the Alliance for Excellent Education (All4Ed), are connecting SAL research to practice and policy. This work aims to ensure that SAL findings reach education leaders positioned to implement innovative and effective education practices and policies that align with SAL research. Through its well-established relationships with researchers, practitioners, and policymakers, All4Ed will serve as a broker to ensure SAL knowledge is adopted and implemented to benefit all learners. This paper also recommends steps for expediting this implementation to support the learning experience and performance of millions of historically underserved students during the next decade.

Photo by Allison Shelley/The Verbatim Agency for American Education: Images of Teachers and Students in Action

Building on Existing Work in the Science of Learning

Thanks to research and modern technological advances, the quality and quantity of knowledge about how people learn and develop has increased dramatically.[3] This "science of learning" examines internal and external processes and influences that affect human learning and development across all stages of life.

It draws from a variety of disciplines, such as brain and cognitive research, as well as social sciences.[4] It includes observations of microscopic cell growth that occurs during learning and cognitive-level experiments to better understand how children and adults learn to speak and read.[5] This research occurs through studies of learning environments, including public school classrooms, where most students experience formal learning opportunities.[6]

As a result, educators and policymakers now have greater access to research on how best to improve learning outcomes and close opportunity and achievement gaps for historically underserved students, including students of color and students from low-income families. However, disciplines of the science of learning are complex and transferring research findings accurately to classroom use can be difficult. Translating this research for lay audiences is a vital first step if the research community wants millions of teachers, principals, and other educators, along with the parents and students they serve, to understand and access these complex research findings.

But all too often the dissemination process stops with translation, and findings tied to the science of learning fail to reach districts, schools, classrooms, and communities in concrete and deliberate ways. For the harried secondary school leader or teacher, one more manual sitting on the bookshelf or featured in a webinar might not be read, much less implemented. Therefore, researchers, practitioners, and policymakers in the United States and globally need to collaborate to ensure that education systems integrate and implement research from the science of learning effectively and consistently.

In the United States, there is a strong foundation of science of learning research upon which new initiatives can build. The National Science Foundation (NSF) recently completed a fifteen-year investment of more than $250 million to fund six U.S.

Science of Learning Centers designed to establish a common interdisciplinary scientific research base regarding all aspects of learning as a foundation for education.[7] Spanning beyond the United States, the Centers also propagated networks of scientists in Australia, China, Hong Kong, Latin America, and Europe. An emerging international community is expressing growing interest in creating a global science of learning network and working with the U.S. research and education sectors to overcome the impact of poverty on learning. Furthermore, creating an infrastructure aimed at using science to inform learning is more of a reality today as technological resources and knowledge sharing are more widely available.

Another positive development is the recent growth of collaborative initiatives in the United States that seek to link research within the science of learning with the application of key findings (see table A1 "Examples of Current Science of Learning Initiatives" in Appendix). These initiatives are working to advance the science of learning broadly by translating research for various audiences. Some focus on specific disciplines or key developmental stages, such as early childhood, to contribute to the larger breadth of knowledge. But a great need still exists to connect research, specifically on adolescent learning and development, to education policy and practice, particularly at the district and school levels where decisions influence teaching and learning directly.

Coming of Age of Adolescence

Studying adolescence as a specific area of learning research for practice and policy is a relatively new undertaking. For years, lack of research and knowledge on adolescence as a distinct period of life led to misconceptions about adolescent behavior and development as well as limited understanding about what the period of adolescence truly represents.

The term "adolescence" was not used frequently in American English until the mid- to late-nineteenth century;[8] meanwhile, the word "teenager," often used interchangeably with adolescent, is even newer, entering American discourse in the 1940s.[9] As social and political changes during the Industrial Revolution created a more autonomous way of life for Western civilization, defining adolescence may have provided a way for society to discuss potential negative effects these new opportunities could have on young people and identify ways to induct them into citizenry and the social order.[10]

Research on adolescence as a period of development began in the early 1900s and continued to grow both in psychology and other scientific fields during the last century.[11] In the new book, *Inventing Ourselves: The Secret Life of the Teenage Brain*, Sarah-Jayne Blakemore, deputy director of the Institute of Cognitive Neuroscience at University College London, offers the following three-pronged argument supporting adolescence as a distinct period of development:

1. Research scientists collaborating from a variety of countries and cultures identified characteristics such as risk taking, self-consciousness, and peer influence in young people worldwide.

2. Research scientists identified adolescence as a period of development in animals. All mammals undergo a period between puberty and sexual maturity akin to adolescence. Animals also show behaviors such as risk taking in the presence of peers similarly to human adolescents.

3. Quotes from leading thinkers, from Socrates to Shakespeare, repeatedly acknowledge challenging behaviors, bad manners, and disregard for authority commonly associated with modern-day teenagers. Aristotle had theories of human development that included adolescence, describing individuals at this stage as "devoted to their friends, committing faults to the side of excess and exaggeration, lacking in sexual restraint, and fickle in their desires."[12]

Science has established adolescence as a distinct period of human development that deserves special attention from policy, practice, and research. It is a biological stage with cultural interpretations and ramifications. Understanding and applying specific research that furthers adolescent learning, especially for the large percentage of historically underserved students, is essential to prepare all youth for a life of continuous learning.

Why Adolescence Is a Critical Period of Development

Discoveries about adolescent brain development provide growing insight about optimal learning conditions for adolescent learners both inside and outside of secondary school. Research shows that adolescence is another period of brain plasticity, or adaptability, rivaled only by the early years from birth to preschool.[13] Moreover, adolescence is a time of transition characterized by rapid physical, emotional, social, and cognitive development.[14] As students move toward adulthood, their bodies and minds change, and those changes affect how they learn and, likewise, should influence how educators work.

> "The biology of the adolescent brain is built for adaptation ... it's [an] opportunity to have a big impact on the rest of the person's life."
>
> **—Ron Dahl, MD, University of California–Berkeley, Center on the Developing Adolescent**

A broad range of factors influence adolescent learning and development, including physiological factors, such as maturation of neural pathways in the brain; psychological factors, such as development of individual identity independent from parental figures; and even differing, sometimes conflicting, cultural and societal expectations.[15] Much more than younger children, adolescents consciously grapple with issues stemming from race, poverty, disability, abuse, and other individual and societal challenges. Consequently, adolescence is a time of great risk but also immense opportunity.[16]

Research about adolescent learning and development draws from a variety of disciplines including, but not limited to, neuroscience, cognitive sciences, psychology, sociology, cultural studies, and medicine. By drawing from these multiple disciplines, the science of *adolescent* learning (SAL) synthesizes what researchers know about adolescent learning and development and challenges traditional thinking about what it means to teach and learn.

Further, it offers an evidence base beyond simply observing students in the classroom setting and making assumptions

about their learning and the strategies that support student needs. One example is with students who have learning differences associated with dyslexia. Neuroscience sheds light on how dyslexia develops in the brain, and in the past decade it has shown promise in diagnosing dyslexia and providing interventions in reading.[17] Dyslexia is the most common neuro-cognitive disorder diagnosed in school with an estimated 5 to 20 percent of students having dyslexia.[18] SAL provides a scientific understanding of how all adolescents learn that can and should guide the approach to education reform.
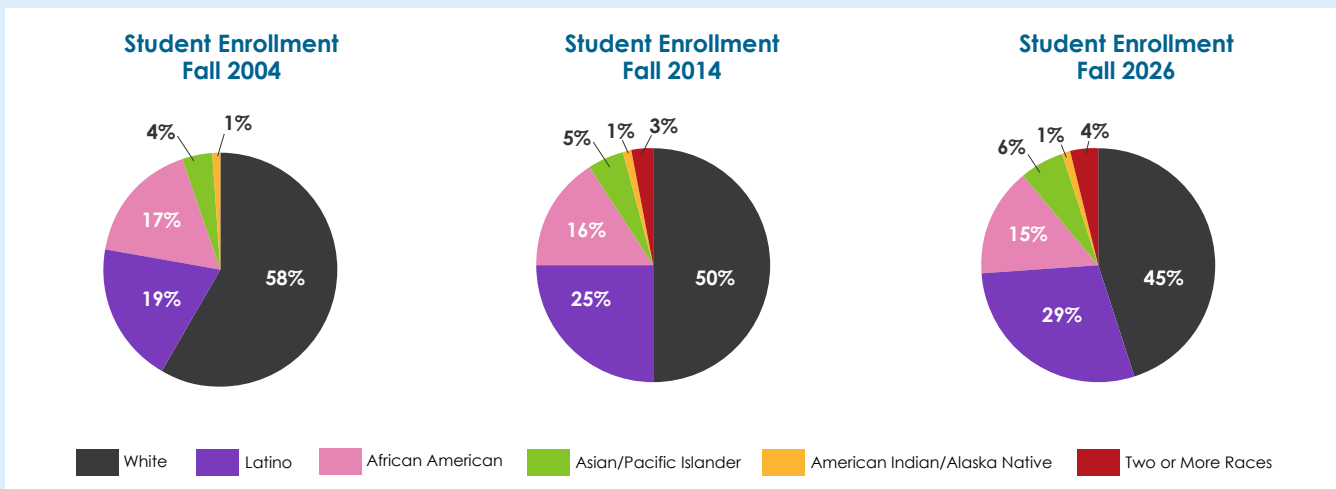
Changing Climate and Context of Public Education

The nation is experiencing a moment of significant opportunity and challenge in education. Today, more than half of the K–12 student population comes from communities of color and low-income families.[19] Yet significant gaps in educational attainment and college and career readiness persist for these groups of students. Students of color and students from low-income families graduate from high school and attend college at much lower rates than their more affluent and white peers.[20] Meanwhile, approximately 2,000 high schools nationwide still graduate fewer than two-thirds of their students and the students attending these low-graduation-rate high schools are disproportionately students from low-income families, African American and Latino students, students with disabilities, and English language

learners.[21] Additionally, pockets of underperforming subgroups of students exist in many high schools that are not considered low-performing. The nation can no longer afford to ignore the growing science for addressing developmental and learning needs of these adolescent students, as they are the nation's future leaders, innovators, workers, and consumers.

At the same time, school and district leaders recognize that building students' academic skills alone will not prepare them adequately for life after high school.[22] As a result, efforts are expanding, albeit unevenly and insufficiently, to develop students' "deeper learning" skills—their abilities to think critically, solve complex problems, communicate, collaborate, and direct their own learning. Educators increasingly are encouraged to use student-centered pedagogical approaches that require them to shape and design learning experiences that meet individual student needs and develop caring and trusting relationships with their students.

Amid these shifts in the education landscape, research and evidence are converging to increase available knowledge about psychological and physiological needs of adolescents, further highlighting the urgent need to rethink school design, strengthen the pool of informed leaders, and change ineffective pedagogy to serve students more effectively.[23] Consequently, teachers, principals, and district leaders must understand research about how students learn and grow, their needs at various stages of development, and the context within which

FIGURE 1: Public School Student Enrollment by Race/Ethnicity, 2004–2026

Student Enrollment Fall 2004

Student Enrollment Fall 2014

Student Enrollment Fall 2026

White · Latino · African American · Asian/Pacific Islander · American Indian/Alaska Native · Two or More Races

Source: U.S. Department of Education, National Center for Education Statistics, *The Condition of Education 2017* (NCES 2017-144) (Washington, DC: U.S. Government Printing Office, 2017).

they live. Ideally, this knowledge will enable educators to identify students' strengths and needs comprehensively and provide appropriate and holistic interventions to support their academic, social, and emotional development.

But simply translating research into lay language and suggested methods for practice will not guarantee its widespread application, especially for the large population of historically underserved students. Educators already face competing demands, juggling new standards and instructional approaches, data systems, and other concepts about learning. Moreover, developing teachers' capacity to apply new research proves challenging since U.S. teachers spend most of their time teaching, leaving less time for professional learning and peer-to-peer collaboration.[24] So while translating technical content for the practitioner in a specific field is a necessary first step, ensuring that practitioners *adopt* and *apply* that content requires additional measures.

# The New Triangle: Researcher, Practitioner, *and* Policymaker

Clearly the secondary school educator is a critical end user for SAL research. Thus, the direct connection between research and practitioner is vital and optimized when educators inform researchers about the type of research they need and do not just consume whatever research currently is available. But district leaders, principals, teachers, and other educators are not only consumers of adolescent research; they also are integral participants in the research process assisting with experimental, quasi-experimental, and non-experimental research, and generating case studies.

But district offices, schools, and classrooms do not act independently of the political process. In a nation that elects many of its education decisionmakers, ranging from local school board members to members of the U.S. Congress who enact major legislation and appropriate billions of dollars, the elected policymaker residing in a committee room significantly influences what occurs in the classroom. Therefore, it is critical to ensure that these important decisions are based on science rather than supposition.

Additionally, while policymakers always have been important to the educational process, the next several years will require their greater involvement in policy *and* practice decisions. Specific language in ESSA creates an urgent need for schools and districts to align their policies and practices with research-based strategies. Under ESSA, state policymakers and state education agencies must identify their lowest-performing schools and support nearly 13,000 school districts nationwide in developing and implementing "comprehensive" interventions to improve these secondary schools.[25] Additionally, any school with one or more low-performing subgroup of students—based on race/ethnicity, socio-economic status, special learning needs, or English language proficiency—also must develop a plan for "targeted" support to improve learning outcomes of those students.[26]

Specifically, ESSA requires these plans to use "evidence-based" interventions to ensure that schools implement strategies proven effective in improving student outcomes.[27] The design of these thousands of school improvement plans creates an incredible opportunity to transform school and district policy and practice and align various measures of success with what decades of scientific research shows to be the underpinnings of how humans learn and develop.

FIGURE 2: Connecting Research, Practice, and Policy
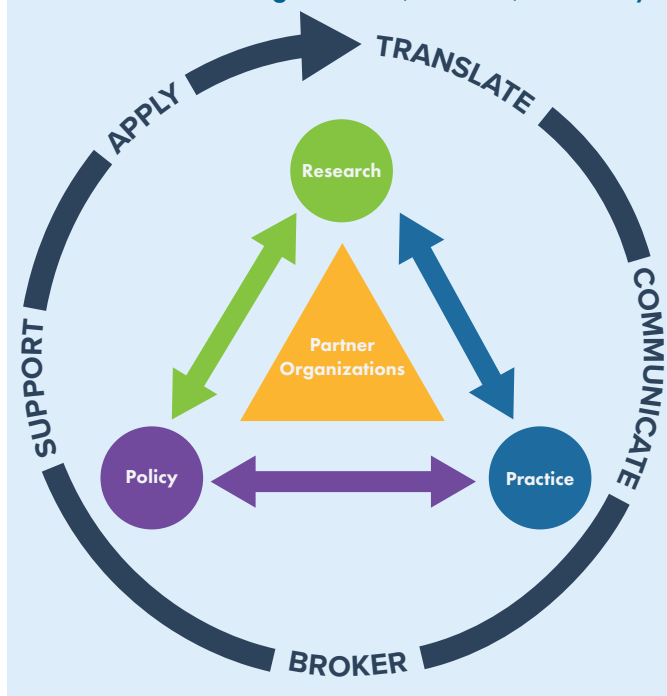
In the development of these district and school plans, and the continued review and implementation of the fifty ESSA-required state plans, the line between what constitutes policy versus practice continues to blur. For instance, when a district school board is deciding how much and what types of professional learning to approve, they are making both a policy and practice decision. Similarly, selecting interventions for a low-performing school requires policy and practice choices.

While researchers and practitioners have a well-established line of communication, the lines from each of those audiences to policymakers are more dotted. Yet policymakers represent a vital audience for SAL research since they make decisions that either support or discourage widespread application of positive, evidence-based practices. For education decisionmaking and practice to incorporate findings from SAL research fully, *these previous straight lines of communication must now become a constantly interacting triangle of researcher, practitioner, and policymaker*. The ideal virtuous cycle occurs when research supports good practice, which influences sound policy to leverage and expand that practice and inform further research. Consequently, the numerous organizations advancing research and its application and implementation must make a deliberate effort to involve policymaking by developing a "brokering" strategy to address varied situations, interests, and responsibilities of policymakers.

Brokering: Moving Research from Understanding to Adoption

It is not sufficient for education leaders solely to grasp SAL principles; they also need technical support and guidance to implement SAL approaches systemically in the unique contexts of thousands of districts and schools. In some cases, the process may occur internally. For example, district or secondary school leaders committed to embedding SAL collaborate among themselves about how to proceed. A more common scenario involves an outside organization assisting with implementation strategies that meet the unique needs of each district or school.

Achieving widespread application of SAL requires "brokering" by intermediaries—catalytic organizations that bring SAL experts and education leaders together to navigate how they can infuse this research into the specific contexts of their states,

districts, and schools. That intermediary must understand the complex research and its translation while also appreciating the individual conditions and needs of educators seeking systemic application into their various teaching and learning environments.

Bror Saxberg, vice president of learning science at the Chan Zuckerberg Initiative, developed the concept of "learning engineer," which he describes as "someone who draws from evidence-based information about human development—including learning—and seeks to apply these results at scale, within contexts, to create affordable, reliable, data-rich learning environments."[28] As researchers develop and translate their findings within SAL, the need to move these findings from the shelf to the school becomes more critical. Establishing strong and dynamic brokering will ensure much more widespread application and implementation of key SAL research to benefit students with the greatest needs.

> "[K]nowing about brain development, knowing that there's that rapid growth in the adolescent timeframe, we decided to focus our efforts at middle school. We are making lots of nudges in the right direction by creating interest in our staff across our district, providing professional learning across our district, and then providing focused support over a number of years ... with the hope that we will be able to continue to scale. We really did want to help teachers and our teachers are excited and asking for more information [about the science of adolescent learning]."
>
> **—Margaret A. Lee, Supervisor of Advanced Academics, Frederick County Public Schools (MD)**

Recently, private philanthropy joined with nonprofit organizations to support the translation of science of learning research generally and the impending process of brokering research for policy development and practice implementation. Some initiatives seek to build upon the research foundation created by the NSF's Science of Learning Centers. Most look to the next steps of widespread application and implementation of science of learning concepts.

As in any rapidly emerging science, the more collaboration and sustained effort, the better. America's secondary schools

can adopt short-term applications and incorporate them in both policy and practice now, but those initiatives working toward longer-term objectives are equally important. Key to this collaboration are contributions of a growing body of international researchers, practitioners, and policymakers, many of whom are advancing science of learning as a means of combating poverty.

Leaders of these numerous initiatives can learn much from one another by sharing information about their progress and determining where more work is needed. The current level of sophistication, involvement, and commitment indicates that this is the time for information sharing across initiatives to maximize impact. Furthermore, rallying around a shared agenda makes it more likely that the science of learning will benefit more students faster. Because the need is so great, a synergy of initiatives only increases the availability of resources and reach necessary for impact.

At this important period, the many initiatives, both domestic and international, should create a mechanism for regularly sharing information and determining more effective ways to collaborate. The urgency of real-time decisionmaking joined with the vast number of historically underserved students demands an even greater level of collaboration to ensure maximum effectiveness.

Science of Adolescent Learning at the Alliance for Excellent Education

The Alliance for Excellent Education (All4Ed) recognizes the value of the many initiatives working to ensure that the U.S. education system aligns with learning and development research. All4Ed's SAL initiative supports the broader call being made by an increasing number of organizations to base school reform in the science of learning. This is a call to action that for the first time is not based on correlational statistics, partisan politics, or popular education trends; rather, it is based on scientific evidence.

With its well-established relationships with researchers, practitioners, and policymakers, All4Ed will serve as a broker to ensure SAL knowledge is adopted and implemented to benefit all learners. All4Ed directly empowers leaders to implement innovative and effective education practices and modernize secondary schools, particularly for students most in need of support, by ensuring that SAL research supports the learning experience and performance of historically underserved students specifically. Without such an effort, SAL research may widen, rather than close, opportunity and achievement gaps.

With extensive involvement in policy development and advocacy, All4Ed observed that SAL research rarely is an active element in policymaking. Therefore, All4Ed's SAL initiative elevates adolescent learning and development research in practice and policy to support evidence-based school improvement strategies and build foundational knowledge and awareness among practitioners and policymakers. Specifically, All4Ed's SAL initiative

- **translates** the academic language of SAL research for practice and policy audiences to inform decisions related to school improvement and effective implementation;

- **communicates** translated SAL research to practitioners and policymakers through a variety of multimedia formats and networks to maximize its reach and impact;

- **brokers** SAL information with education leaders to foster adoption of SAL approaches within the context of their schools and districts;

- **supports** practitioners in applying substantiated SAL research in their schools as part of their school improvement strategies; and

- **identifies** areas of need for further research on issues that disproportionately influence historically underserved students.

To support and facilitate the alignment of policy, research, and practice, All4Ed collaborated with a group of world-class researchers, expert practitioners, and policymakers to create a set of consensus statements about SAL. These consensus statements represent common agreements among leading researchers and their specific areas of study. These statements also will inform a series of reports on educational practices and state and local policy decisions aligned with research. Scheduled for release this summer, these reports will introduce the consensus statements, provide supporting research, and identify implications for policy and practice around adolescent learners.

All4Ed also will highlight the work of these researchers and their perspectives through its forthcoming podcast and webinar series. As with all of All4Ed's work, the research base and recommendations made through the SAL initiative will highlight unique lived experiences and implications of this knowledge for historically underserved students, specifically students of color and students from low-income families.

Conclusion

Public education currently faces a critical moment for improving learning outcomes of historically underserved students and those who are underperforming. With ESSA, federal policy created new opportunities for educators to leverage research-based evidence about the most effective strategies for school improvement. Meanwhile, scientific disciplines converged to create a cohesive understanding about how students learn and develop. Equally significant is the confluence of many organizations that seek to infuse the science of learning into education practice and policy.

Photo by Allison Shelley/The Verbatim Agency for American Education: Images of Teachers and Students in Action

For this unique era to realize maximum impact for all students—especially historically underserved adolescents—All4Ed recommends the following:

- Policymakers should join researchers and practitioners in a critical triangle of communication and cooperation to infuse science of learning across all developmental stages into education practice and policy.

- The various initiatives focused on the science of learning should collaborate deliberately and regularly, paying attention to contributions of international researchers and other similar-minded organizations.

- Partner organizations aligning science of learning research with policy and practice should embrace brokering as an essential part of any strategy for widespread application and implementation.

The time has come to align research, practice, and policy with educational needs of the nation's most vulnerable students. Achieving this alignment, though, requires a cohesive and collective effort from groups such as researchers, educators, policymakers, advocacy and civil rights organizations, and philanthropy to support the implementation of school improvement strategies based on science, not assumptions. The learning outcomes for millions of historically underserved adolescent learners depends on it.

Endnotes

1 Adolescent learning spans the middle and high school years. While All4Ed's work typically focuses on high school learning, it also addresses transitions into high school and postsecondary education. In the context of SAL, All4Ed's work will support the full range of secondary school considerations.

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Appendix

TABLE A1: Examples of Current Science of Learning Initiatives

Organization(s)/Science of Learning Initiative	Description of Science of Learning Initiative
Science of Learning and Development Initiative (SoLD) **(Opportunity Institute, EducationCounsel, American Institutes for Research, Turnaround for Children, Center for Individual Opportunity, Learning Policy Institute)**	SoLD represents a coalition of developmental scientists and education research, policy, and practice organizations focused on synthesizing and translating the diverse body of scientific literature to support the transformation of education systems. theopportunityinstitute.org/science-of-learning-and-development/
Aspen Institute's National Commission on Social, Emotional, and Academic Development (SEAD)	The commission on SEAD includes researchers, practitioners, parents, and students exploring how schools fully can integrate social, emotional, and academic development research–based approaches to support the whole student. www.aspeninstitute.org/programs/national-commission-on-social-emotional-and-academic-development/
Collaborative for Academic, Social, and Emotional Learning (CASEL)	CASEL's mission is to help make evidence-based social and emotional learning (SEL) an integral part of education from preschool through high school. CASEL and its broad network of collaborators are working together to turn momentum for SEL into a national movement. casel.org
Center for American Progress's (CAP's) Science of Learning Project	CAP's science of learning project aims to put learning sciences at the forefront of school reform and answer critical questions relating to policies that support the science of learning, better translation practices for research, and programs that result in effective learning. www.americanprogress.org/press/release/2016/12/05/293811/release-cap-announces-new-initiative-centered-around-the-science-of-learning/
Digital Promise Global's Learner Positioning Systems (LPS)	LPS brings together leading researchers across neuroscience, cognitive science, and social-emotional learning fields with innovative developers and practitioners to explore and design new models for research-based personalization of learning. This work builds bridges between different sectors to develop models that represent the full diversity of learners, connect research to practice, and elevate stories to inspire action. digitalpromise.org/initiative/learner-positioning-systems/
National Science Foundation's (NSF's) Science of Learning Program	The goals of NSF's Science of Learning program are to develop basic theoretical insights and fundamental knowledge about learning principles, processes, and constraints from a variety of disciplines ranging from molecular and cellular mechanisms to social and cultural influences. NSF funded six centers during the past decade to advance the knowledge and understanding of the science of learning. www.nsf.gov/funding/pgm_summ.jsp?pims_id=5567

Organization(s)/Science of Learning Initiative	Description of Science of Learning Initiative
Adolescent Science Translation Funder Collaborative	The Adolescent Science Translation Funder Collaborative supports projects that create a definitive synthesis of the growing body of research on adolescent development, develop better message frames for discussing adolescents, create a hub for related research to message and align communications efforts to amplify the work, and accelerate innovative interventions, as well as systems and policy change grounded in the science of adolescent development. thrivingyouth.org/news/
National Academies of Sciences, Engineering, and Medicine Adolescent Development Consensus Studies	The National Academies of Sciences, Engineering, and Medicine are conducting two consensus studies that take a life course approach in applying neurobiological and socio-behavioral science of how individual bio-behavioral factors, from the prenatal period through adolescence, interact with the social distribution of risks and resources. sites.nationalacademies.org/DBASSE/BCYF/Adolescent-Development/index.htm
Frameworks Institute and Center on the Developing Adolescent	The Frameworks Institute is partnering with the Center on the Developing Adolescent to synthesize and facilitate the translation of developmental science of adolescence. developingadolescent.berkeley.edu/research/framing-the-developmental-science-of-adolescence
New America Foundation's Learning Sciences Exchange (LSX)	LSX fosters broader understanding, widespread dissemination, and better application of insights emerging from the science of early learning. www.newamerica.org/education-policy/learning-sciences-exchange-lsx/
U.S. Department of Education (ED)	The "Joint Explanatory Statement," also known as the Committee Report that accompanied the Consolidated Appropriations Act, includes the language, "encouraging [ED] to seek opportunities to collaborate with researchers from the fields of neuroscience, cognitive development, psychiatry, psychology, and education and human development, for the purposes of promoting research-based scientific interventions in the science of learning that improve academic outcomes for high-need, high-poverty students." The agreement also directs ED to prioritize proposals that seek to improve early learning and cognitive development outcomes among high-need, high-poverty students through neuroscience-based and scientifically validated interventions and meet evidence requirements for this program established by ESSA. www.congress.gov/crec/2018/03/22/CREC-2018-03-22-bk3.pdf