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Learners with **Next-Gen Tools**

TABLE OF CONTENTS

Introduction	01
Who are English Language Learners?	03
English Language Learners and Academic Achievement	04
Goal of this Publication	04
Supporting ELLs with Standards-Aligned Materials	07
Technology to Improve English Language Learning Tools	09
Tools and Solutions	12
10 Elements of Next-Gen English Language Learning	16
Strong Culture	17
Bilingual & Biliterate Programs	18
Blended Learning	19
Alternate Assessments & Credit for Proficiency	21
Next-Gen Project-Based Learning	23
Family & Community Engagement	25
Next-Gen Teacher Professional Development	28
Data to Inform Instruction	31
Next-Gen Digital Tools	32
Personalized Learning	35
Conclusion	36
Adoption Gap	36
Standards Gap	36
Invention Gap	37
Recommendations	37
Acknowledgments	38
Glossary	39
Appendix	39
Endnotes	40

EXECUTIVE SUMMARY

Almost five million students in the public education system are English Language Learners.¹ Reaching all of America's students includes meeting the needs of diverse learners that possess a wide variance in skills, backgrounds, cultures and family supports. Supporting English Language Learners (ELLs), and ultimately all students, involves multiple strategies, professional learning and environmental support. It also means providing next-gen and technological tools that can support language acquisition.

To highlight existing technological tools and illuminate gaps in the field, *Supporting English Language Learners with Next-Gen Tools* illuminates key learnings from over 25 experienced English Language Learner (ELL) educators, experts, education technology leaders and thought leaders across the United States.

This publication also provides a landscape overview of English language tools and supports that were cultivated through information from companies and organizations that support ELLs. This group included Math and English Language Arts (ELA) content providers, ELL-specific technological solutions, and communications tools and platforms.

This publication also describes 10 Elements of Next-Gen English Language Learning which includes:

- » Policy and educational leadership support of bilingual and multilingual learning;
- » Strong cultural advocacy and asset-based instruction;
- » EdTech investments and digital tools that support language learning; and
- » Inclusion of student interests and goals into instruction through personalized learning.

Technological tools alone are not the only solutions to help ELLs—or any learner. These tools must be utilized in concert with other strategies that support language acquisition. This publication includes strategies to teach and reach ELLs and recognizes the large body of research and practitioner-based work in the field built around the complexities of language acquisition and language learning.

INTRODUCTION

Almost 5 million students across the U.S. were English Language Learners in the 2013-2014 school year—nearly 10 percent of the overall student population.² The number of ELLs increased by 60 percent from 1996 to 2006, according to the US Department of Education's Biennial Report to Congress 2004 to 2006. ³ If immigration data projections are any indication, growth of this population is not likely to slow down anytime soon. By 2030, 40 percent of all elementary and secondary students could be "language minority students."⁴

With the 2015 passage of Every Student Succeeds Act (ESSA), the federal government has made teaching ELLs a priority through stronger accountability provisions and the authorization of additional funding. Secretary of Education John King says, "Under ESSA, states have the opportunity to broaden the definition of educational excellence to ensure that it is well-rounded and incorporates biliteracy and multiliteracy." King also comments, "States have the opportunity to invest in ensuring that all new teachers are ready to work in the diverse settings that characterize our schools, and to see the fact that a child speaks a language other than English at home as an asset rather than as a deficit." 5

While our country grows in diversity, schools have to serve students with vastly different backgrounds and needs. ELLs face many challenges in school and test results show they often fall behind their non-ELL peers. ELLs are less likely to graduate in four years, at a rate of approximately 63 percent compared to a national average of 82 percent. The percentage of ELLs graduating high school within four years also trails others subgroups, including students with disabilities and those who come from low-income families.⁶ For example, Arizona has the 11th highest ELL enrollment in the nation and 18% of ELLs graduate within four years. California has the largest ELL

enrollment in nation with 65% ELLs graduating within four years. In Texas, which has the 2nd largest ELL population, 71% of ELLs graduate within 4 years.⁷

Although these numbers suggest ELLs do not perform as well as their non ELL counterparts, there is evidence to suggest that given the right types of supports, bilingual or multilingual students perform better academically over time.⁸ Studies show within 4 to 5 years bilingual students typically outperform their peers that are in peers that are in one language classrooms.⁹

Education technology supports, professional development and policy recommendations can and should focus on bilingual and multilingual education as an asset-based approach to teaching and reaching all learners.

Reaching all of America's students includes meeting the needs of diverse learners that possess a wide variety of skills, backgrounds, cultures and family supports. Supporting ELLs, and ultimately all students, involves multiple strategies, professional learning and environmental support. It also means providing next-gen and technological tools that can support language acquisition.

Key for Featured Text

Throughout this paper you'll find featured quotes, research-based information, spotlights on model schools or English Language Learner (ELL) tools, and stories voiced by ELL students. Whether appearing as a pop-out section of text or a sidebar, the type of information featured can be quickly identified by the following icon designations:



Research. Information that proves helpful for building a foundational knowledge of the challenges faced by ELLs and the solutions available.



Quote. Direct quote from journal articles, books or communications with experts on the subject matter.



Spotlight. Stories that feature real-life experiences from ELL schools or feature the benefits of specific ELL tools.



Voices of ELL. Specific-use cases that illustrate how tools may be utilized by a specific learner.

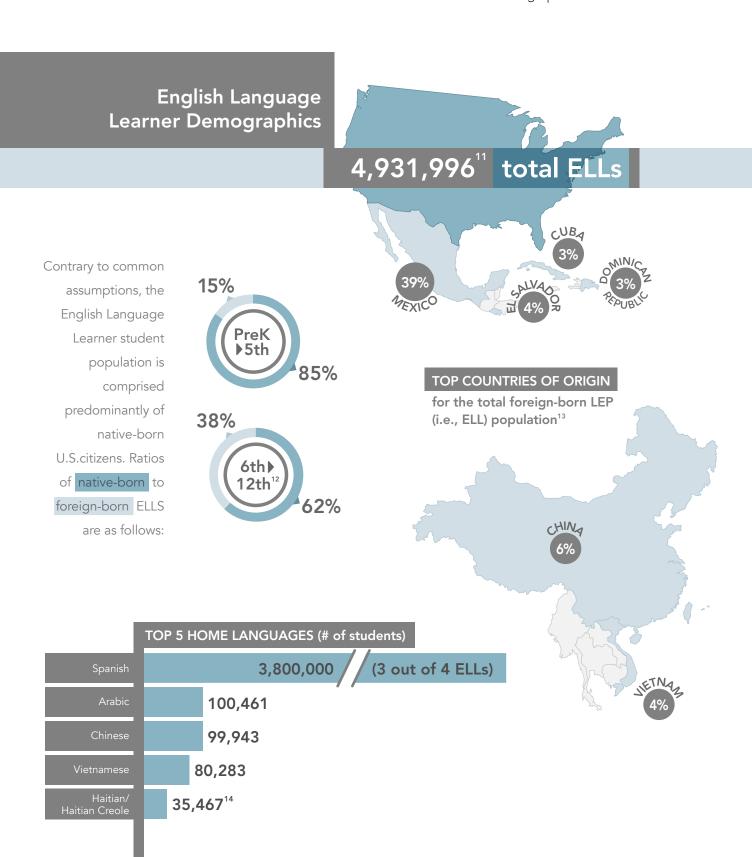
A Note on Terminology

For the purposes of this paper, the term English Language Learner (ELL) continues to be the norm to describe a student who "is in the process of actively acquiring English, and whose primary language is one other than English. This student often benefits from language support programs to improve academic performance in English due to challenges with reading, comprehension, speaking and/or writing skills in English. Other terms commonly used to refer to ELLs include language minority students, English as a Second Language (ESL) students, Culturally and Linguistically Diverse (CLD) students and Limited English Proficient (LEP) students." ¹⁰

The education sector has also begun to call ELL students Multi-Lingual Learners, Multi-Language Learners or emergent bilinguals. This publication will use the term ELL since that remains the current standard. Please see the glossary in the Appendix for additional definitions.

Who are English Language Learners?

Various studies confirm that ELLs have unique needs that necessitate a toolset that is flexible and customizable, based on who these students are as learners. See below the breakdown of demographics of ELLs.



English Language Learners and Academic Achievement

Students who are non-native English speakers often do not do as well in school as their peers who speak English. The National Assessment of Educational Progress (NAEP) began tracking assessment data of ELLs as a student group in 1996.

In the years from 1996 to 2015, the average reading scores for non-ELL fourth-grade and eighth-grade students were higher than their ELL peers' scores. The 2015 NAEP assessment showed a 36-point achievement gap between ELL and non-ELL students at the fourth-grade level and a 44-point gap at the eighth-grade level in reading.¹⁶

Similarly in math, the 2015 assessment showed a 25-point achievement gap between ELL and non-ELL students at the fourth-grade level and a 38-point gap at the eighth-grade level.¹⁷

ELLs come from a wide variety of backgrounds; reaching and teaching ELLs depends on a number of factors including: student's age, immigrant or refugee status, family income, literacy in home language, and cultural and family background.

Therefore, no uniform solution, tool or process exists for reaching America's ELL population. Judie Haynes' book, "Getting Started with English Language Learners: How Educators Can Meet the Challenge,"

provides an overview of the types of ELL programs in place throughout the country's schools. The programs identified differ in what students study, where they study and how much time they spend with their native language. The programs outlined and discussed are as follows (organized below from least to most time spent on literacy in their native language):

- English as a Second Language Programs: Pullout or Collaborative. No time with native language.
- Structured Immersion (SI) or Sheltered English Programs. Some time with native language, though not formal instruction. These programs are commonly based on the following research-based methods:
 - Sheltered Instruction Observation Protocol (SIOP)
 - Cognitive Academic Language Learning Approach (CALLA)
- Bilingual Programs. Instruction in native language varies by method as noted below. Three types of bilingual programs exist:
 - Early Exit or Transitional Bilingual Programs: Up to three years of supplemental instruction in primary language.
 - Developmental Bilingual Education Programs: Supplemental instruction in primary language through elementary school, even after becoming proficient in English.
 - Dual-Language or Two-Way Bilingual Immersion Programs: Continue receiving instructions in both languages throughout school career.



"We believe that it's not enough to provide English Language Learners (ELLs) with a generally good teacher. To close the achievement gaps and to build on ELLs' strengths, we need to provide teachers for ELLs who have additional skills and abilities."15

Our Process

To highlight existing technological tools and illuminate gaps in the field, we interviewed over 25 experienced English Language Learner (ELL) practioners, experts, education technology leaders and thought leaders across the United States and visited two school districts that support ELLs. We invited guest blogs from teachers and thought leaders who work in various schools, districts and networks that support ELL students. To date, we have published 14 blogs authored by guest bloggers in the field. We also utilized social media at #SupportELL to generate conversation and to specifically ask what tools and resources people across the country use to support ELLs.

Through our public Request for Information form, we received information from 39 organizations that support ELLs. This group included Math and English Language Arts (ELA) content providers, ELL-specific technological solutions and communications tools and platforms, including those that seek to communicate with parents and families. The results of this investigation and information can be found in the following sections of this publication.

For a full list of contributing organizations, see the Acknowledgements section of this publication.

Goal of this Publication

As outlined in "A Framework for Raising Expectations and Instructional Rigor for English Language Learners," one challenge in reaching and teaching ELLs involves the difficulty that schools experience, especially in urban areas, in finding high-quality, rigorous, grade-level instructional materials written for ELLs at varying levels of English proficiency. Researchers suggest that instruction must be scaffolded appropriately for a vareity of proficiency levels, students must be accessing rigorous, grade-level content.

In the process of producing the report, the Council conducted a field survey "to gauge the perceived quality of instructional materials for ELLs. The results of this survey corroborated what has been common knowledge among urban educators for some time, i.e., quality instructional materials for ELLs are in short supply and the need has been exacerbated by the adoption of the [Common Core State Standards (CCCS) as well as new state-level English Language Development (ELD) standards]."18 These recommendations will be discussed in detail on page 07.



In 2013, Getting Smart partnered with Rosetta Stone to release a report called "The Next Generation of World Language Learning." While the report focused primarily on world language learning as a key component of global competency and a potential catalyst for a shift to personalized learning, many of the findings hold true for the next generation of English Language Learning instruction as well. Pointing to the potential of educational technology to complement traditional language instruction, the authors described seven design principles for next-gen world language learning.

- **Immersion**
- Mobile learning
- Student-centered collaboration
- Interdisciplinary work
- Game-based learning & augmented reality
- Standards-based grading
- Reorganization of physical space

Given the gap in instructional materials, the goal of this project centers on illuminating resources that focus on implementable tools for teachers and instructional leaders around the support of ELLs.

This publication provides an overview of tools to support ELLs and teachers at the field level and highlights innovation opportunities. In this paper, present-day, specific user-case studies illustrate ways in which digital tools can support students and teachers at the school and classroom level.

At the same time, technological tools and supports alone are not the only solutions to help ELLs—or any learners. These tools must be utilized in concert with other strategies that support language acquisition.

We will touch on these strategies and recognize the large body of research and practitionerbased work in the field built around the complexities of language acquisition and language learning.

This paper includes:

- » A landscape analysis of ELL programs, strategies, tools and applications
- » Findings on what students need to acquire English and what teachers need in order to teach ELLs
- » Specific recommendations for future tools based on findings



"Now more than ever, teachers must be well-prepared to meet the needs of ELLs and have a diverse repertoire of strategies to help these students succeed as academic writers. Because writing is a gatekeeper for college admission and a key criterion for hiring and promoting salaried workers, the ability to write well is [essential]."19

SUPPORTING ELLS WITH STANDARDS-ALIGNED MATERIALS

With the passage of ESSA, a growing population of ELLs must be able to access rigorous math and English Language Arts standards and develop English language fluency in addition to gaining content knowledge.

The World-Class Instructional Design and Assessments Consortium (WIDA) is an organization that aims to be a trusted resource in the education of language learners. WIDA's mission is to advance "academic language development and academic achievement for linguistically diverse students through high quality standards, assessments, research and professional development for educators."23 WIDA is well known for their performance definitions for four language domains that include speaking, reading, listening and writing. For EdTech companies looking to support ELLs,

Selecting Instructional Materials

In "A Framework for Raising Expectations and Instructional Rigor for English Language Learners," the authors write that we need to ensure English Language Learners (ELLs) have materials that meet their needs based on specific guidelines.

Published by the Council of the Great City Schools, the authors of the report identified four main challenges and factors when building programs that support ELLs:

- Diversity of English language learners
- Differing definitions or nomenclature of English Language Development (ELD)
- Variances in Instructional Delivery
- Variance in the strategic use of native languages²⁰

The report provides a user's guide to evaluating materials for ELLs. The guide includes a rubric that schools and districts can utilize to determine the products, tools and materials for classroom use. When selecting instructional materials, administrators and educators should confirm that materials have been designed and validated for use with ELLs, align with state standards and establish high expectations. Non-negotiable requirements when designing materials for ELLs include:

- Rigor in language development
- Access to grade-level instructional content
- Scaffolding for ELLs without compromising rigor or content
- Access to text that increases in complexity

The report also emphasizes the role that technology can play in supporting English language acquisition, and clearly states that technology "cannot be seen as a technology adaptations can make a significant contribution to the field by supporting these four domains, such as those below.

Specific writing adaptations include writing organizers such as graphic organizers and do/what charts. Tech solutions can also include thesarus and dictionary "look ups," spell checkers and text-to-voice. Translation services can also support ELLs, but they have to be used in ways that support language learning and avoid long-term reliance.

Reading adaptations include vocabulary builders and comprehension strategies such as Know/Want to Know/Learned charts and inclusion of tools that allow students to read rich text and listen aloud to it. Tools that allow for automatic feedback on speaking and pronunciation in concert with other domains of learning are also ways to support ELL language acquisition. Listening tools that include transcripts so students can read along while listening to a story or script are helpful. Similar to transcripts, using video so students can see body language and pick up even more of the conversation can be beneficial.²⁴

Selecting Instructional Materials (cont'd)

single factor to transform instruction; rather, technology is used to support students in their development of academic literacy through promotion of independent reading, support for language scaffolding, facilitating involvement in cognitively engaging projects..." and supporting students' own needs.²¹ (This publication goes into more detail around the concept of personalized learning in subsequent sections).

For EdTech developers, specific strategies for the development of materials to support ELLs must be taken into consideration. (For a full list of these recommendations, see the report "A Framework for Raising Expectations and Instructional Rigor for English Language Learners" and see the well-developed and thorough ELL Metrics Scoring Sheet within that publication).

- Examples of the Council's specific suggestions for ELL instructional materials include:
- Grade-appropriate content and themes that allow for development of grade-level language and content
- Pre-reading activities that provide visual support
- Richly developed text-dependent and text-specific questions
- Culturally responsive, high quality texts
- Materials [that] require students to engage, at regular intervals, in mini writing tasks that enable ELLs to develop the linguistic repertoire needed to perform extended and increasingly complex informative and argumentative writing tasks
- Materials must consider how mastery of language conventions develop along a non-linear progression
- Materials include multiple opportunities for students to listen to authentic models of academic English
- Teacher resources provide instructional suggestions/ recommendations for scaffolding diverse students
- Materials should offer a wide variety of culturally relevant texts, organized in appropriate themes/ topics
- Teachers' resources should include explicit guidance for identifying culturally distinct discourse patterns and linguistic features within texts, highlighting similarities and/or contrasting differences
- Materials should attend to the needs of students with interrupted formal education (SIFE), newcomers and other students with specific needs.²²

TECHNOLOGY TO IMPROVE ENGLISH LANGUAGE LEARNING TOOLS

The movement to personalize learning applies to the growing number of ELLs. New technological tools and blended learning models address the growing challenge of diverse learners.

Some applications have been specifically designed for the ELL, some literacy tools have useful accommodations, and some content is automatically leveled. Some school districts across the United States have adopted dual language strategies. Some schools use immersive and collaborative strategies. Some school networks use a variety of blended and intervention strategies to support ELL.

To set the stage for further review of tools that support ELLs, we present a set of definitions for technologies currently incorporated into English Language Arts (ELA) and ELL technical applications. The expansion of mobile access, the explosion of applications and the rise of machine learning impact how we support ELLs. In the US, EdTech investments reached almost \$2 billion dollars in 2015.²⁵ (Globally, the EdTech market was over \$6 billion dollars in 2015).²⁶ These investments have resulted in improvements to hundreds of reading and writing apps and the development of new products. Some of these investments have specifically created products and adaptions for ELLs, which will be discussed further in this paper.

To identify impact opportunities discussed in the Conclusion section of this paper, it's helpful to take a quick dive into the underlying technologies behind these product categories and to look at the status of the technology (i.e., in basic research, in applied research, used in product development or mature development) and its current level of adoption.

Natural Language Processing

Machine learning applications seeking to extract meaning from text **Applications:** translation, writing feedback, speech recognition, natural language generation, question answering, information retrieval **Uses:** writing feedback/scoring systems have been used for 15 years

but are not widely adopted

Potential use: conversation agent that can detect/promote levels of understanding; feedback on constructed response (untrained data)

Impact potential: very high

Stage: applied research and product development

Other Machine Learning

Algorithms that learn from and make predictions on data **Applications:** assess and recommend optimal development pathways by learner type; determine the most efficient practice schedule and content for each learner

Use: adaptive assessment, reading and math systems (widely adopted)

Impact potential: high

Stage: adaptive products are mature and widely adopted in blended deployment models; other Machine Learning apps are in applied research and product development

Voice Recognition

Speech recognition understands voice commands; digital voice signal processing detects proper/improper pronunciation Use: reading instruction, conversation with a smart agent

Impact potential: moderate

Stage: widely used as a search aid (e.g., Siri); other apps in research or

development

Computer Vision

Image and facial recognition

Use: ability for a computer to read a passage or recognize an image and to translate it into speech in several languages and/or provide several relevant content links

Impact potential: moderate

Use: personal learning assistant when combined with camera, Machine

Learning (i.e. Volley)

Stage: applied research, product development

Augmented Reality

Live view augmented by computer information via mobile or headset **Use:** when combined with Computer Vision, Machine Learning and Natural Language Processing, could recognize objects, provide contextual conversation

Impact potential: moderate

Stage: applied research, product development

Virtual Reality

Immersive environments requiring headset **Use:** learning environments that with Natural Language Processing and Machine Learning could provide full conversation support

Impact potential: moderate

Stage: applied research, product development

Learner Profile

Comprehensive record of progress and related learning factors (assessment results, motivational preferences, special challenges) Use: will inform every technology listed here and will provide

recommendations to teachers

Impact potential: high (for all students)

Stage: applied research, will require industry standard(s) on

assessment integration²⁷

Telepresence

Video conferencing with chat and content sharing often combined with distributed workforce strategies **Use:** tutoring and speech therapy (i.e. PresenceLearning)

Impact potential: moderate **Stage:** widely used and adopted

Automated Assessment

Automated assessment scoring, can be used to drive adaptive sequences **Use:** combine with standards (for reading, writing, speaking and listening) and teacher-scored performance assessments to form microcredential/badge sequences in competency-based systems

Impact potential: moderate (full competency-based progressions that link formal and informal learning offer moderately high potential)

Stage: applied research and product development

Translation

Automated language translation

Use: student support in content-based learning; parent

communication

Impact potential: moderate

Stage: widely used in parent communication; some new apps in

product development

Social Media

Platforms that connect and promote content sharing among groups and individuals Use: live, video and text conversation with native speakers;

professional learning communities for educators

Impact potential: moderate

Stage: widely used

TOOLS AND SOLUTIONS

Below is a series of charts that summarize some products, services and tools that support ELLs and their teachers. This chart is not meant to be exhaustive of all ELL-specific products and services. In fact, many of products included below are not specifically designed for use with ELLs. Some tools are designed for mainstream use and also serve ELLs.

To gather information from education technology companies, Getting Smart invited education technology companies to fill out a form to provide information on their ELL adaptations. This paper is meant to provide a general overview of tools available as well as note ELL specific adaptations. This is not an endorsement of any particular product, tool or service. When making decisions about specific tools for teachers and students, we strongly encourage research and application demonstrations for applicability in your context, as well as alignment to current new state standards.

If you would like to join the conversation and share other tools, please use #SupportELL on social media to contribute specific technology-enabled tools.

The products and tools have been divided into two main categories:

- » ELL-Specific Products
- » Communications & Translation Products & Tools

Whenever possible, specific use cases were included with each category. Use case includes student grade span, type of classroom/learning environment, level of first language acquisition, cultural background, etc.

We also highlighted some content specific Math and English Language Arts content tools in our blog titled 20 Math and ELA Tools that Support English Language Learners.

English Language Learner Specific Products

Tool/Product	Brief Description	Best Practice and/or Ideal Use (Unique Value Proposition)	Grade Level(s)
Ellevation	Software exclusively focused on ELLs and their educators with tools that support school districts' instruction, collaboration, student data analysis and reporting.	There are different use cases across the diverse customer base. Success stories follow this theme: In the first year, a district implements the platform to organize student information, fulfill important compliance responsibilities and generate Individualized Language Plans. In the second year, districts extend Ellevation to classroom teachers in order to build their capacity to serve ELLs. Users may also deploy Instructional Strategies to help classroom teachers scaffold classroom content. Ellevation InClass builds capacity among all classroom teachers to become teachers of language.	K-12
ELLoquence	A digital instruction solution that blends high-tech and hands-on instruction to accelerate English language acquisition.	In a classroom with teacher doing some direct instruction, as well as facilitating interactive and participatory activities. Students have some access to technology in classroom or at home. Sheltered, single level is ideal.	6-12
IStation	Comprehensive e-learning program with accurate assessments, engaging curriculum & trusted teacher tools.	Many students use at home or at school.	K-8
Learning A-Z's Enhanced ELL Reading Solution	A large collection of timesaving ELL-specific resources available in printable, projectable, digital and mobile formats.	In the classroom, can be used for both Data-Driven ELL Instruction and Content-Based ELL Instruction. The flexible design of the program supports individual, small group and whole group instruction.	K-5
Middlebury Interactive Languages Digital ELL Curriculum	A digital, standards-based supplemental English language program focused on academic English and literacy development.	Designed to support students in blended -learning classrooms with flexible time allocated depending on student needs, class size and scheduling considerations.	4-10
Pearson Test of English Language Learning (TELL)	An interactive, tablet-based assessment developed to support schools as they ensure that the growing population of English language learners (ELLs) build English language skills and stay on track to meet rigorous academic standards.	Throughout the school year to measure the progress of ELLs and determine instructional plans.	K-12
PreK12Plaza	Specifically designed for ELLs with digital tools for Math and Language Arts aligned with the Common Core Standards in English and Spanish.	Supplements classroom curriculum.	Pre-K-12
Rosetta Stone's Language Learning Suite	A tool that addresses all English language proficiency levels from newcomer to long term ELLs.	Independent study at school or home. Encourages parental involvement by providing them access.	3-12

The following use cases are fictional stories. These stories are based on numerous interviews with teachers about specific tools students use in their classrooms.



Voices of English Language Learners

Maria is a third-grade student who came to the United States with her family from Central America. She is at a third-grade reading and writing level in Spanish and has limited English proficiency. At her school, the students use IStation in an English immersion class. The program makes English reading comprehensible using sheltered instructional techniques, focuses on the academic vocabulary that K-5 students are expected to know and provides practice with these keywords across tightly-leveled, decodable readers as well as other passages and books. The IStation reading curriculum teaches students to understand and read English, thus paving the way for increased achievement as they read to learn throughout their years of schooling and beyond.

Communications Tools and Products

Tool/Product	Brief Description & ELL Adaptions	Best Practice and/or Ideal Use (Unique Value Proposition)
Class Dojo	A communication platform for teachers, parents and students that creates a community inside and around every classroom. With ClassDojo Translate, teachers can easily communicate with parents who don't speak English. Any post can be viewed by a parent in their preferred language.	Teachers, students and parents of elementary and middle school-aged learners.
Edmodo	A global education network that helps connect all learners with the people and resources needed to reach their full potential. Edmodo has professional learning communities on ELL as well as a growing list of ELL specific content in our marketplace Spotlight.	K-12 teacher, students and parents, including school administrators.
PEGWriting by Measurement Inc.	An online practice writing site, allowing students to write and revise essays and receive immediate feedback and scoring on the six traits of writing. Teachers can add ELL support teachers and other support personnel to their classes so that students receive messaging and feedback from all parties. For example, the ELL teacher might add comments or messages for all ELL students on the first or second draft, while the regular-ed teacher adds hers to the third draft for all students.	For students in grades 3-12 (plus community college), in classrooms and homeschool environments.
Remind	A free, modern messaging app that helps teachers, students and parents send quick, simple messages to any device. Remind Translate converts messages in six languages.	Any K-12 teacher, student or parent.
OneNote and Learning Tools for OneNote	Application that helps organize all class materials into one digital notebook. Access and prepare lessons and assignments from any device. English language learners increase their fluency with built-in reading and writing tools called Learning Tools for OneNote. OneNote also enables frequent feedback, as well as reflection on learning that develops metacognition supported by research in persistence. The strongest impact on reading skills comes from attention to spatial and auditory perceptionskills like those enabled by Learning Tools for OneNote. Writing skills are developed through strategies and practice in planning and revising, especially in peer groups.	Second-12th-grade learners or parents of learners for digital note-taking, reading handouts, completion of assignments in a Class Notebook or collaboration with teacher and peers.



Voices of English Language Learners

Nahla and her two brothers attend a public school that uses Class Dojo to help teachers communicate directly and effectively with parents. Although she and her brothers learn English at school, they speak Arabic at home. Her teachers don't know Arabic, which can make conferences and other communications tricky. But her parents love getting messages from the Class Dojo app because they can translate any message received into their native language and stay informed on the latest with Nahla and her brothers.

Innovation Opportunities

Based on our research, innovation opportunities exist using technology to support English Language Learners (ELLs). In adaptive reading products such as iReady and Imagine Learning, innovation opportunities include increasing content and having more subject areas covered. With leveled readers such as Lexia and Newsela we expect more titles including open content and better personalized recommendations. In the area of ELA and math courses with ELL supports, such as Apex Learning, Edgenuity and Middlebury Interactive Languages, the innovation opportunity includes increasing personalized supports for diverse learners. ELA lessons with ELL supports such as EL Education and Engage NY could integrate their platforms with learner profiles and more teacher coaching. Vocabulary content such as Brain POP and Flocabulary could add personalized adaptive playlists. Writing feedback such as WriteToLearn and Turnitin's LightSide Labs have an opportunity to add text-to-speech feedback translation and stronger user experiences (UX). Reading intervention programs such as Achieve3000 and Read180 will move towards personalized supports.

ELL-specific tools and products can innovate in the following ways:

- Be adaptive, especially with assessments and supports that are increasingly personalized
- Offer ELL PD that includes links to resources, and create opportunities for educators to earn microcredentials
- Offer supports in multiple languages. Communication tools such as Class DoJo and Remind will begin to integrate with learning platforms.
- Learning assistants such as Siri, Cortana and Volley will link to students' personal profiles and become increasingly adaptive.

10 ELEMENTS OF NEXT-GEN ENGLISH LANGUAGE LEARNING

Our landscape analysis of tools and products as well as interviews with teachers, edleaders and researchers led to the creation of 10 Key Elements of Next-Gen ELL. The elements summarize and represent current influences and factors that impact reaching, teaching and meeting the needs of all ELLs. Those elements are:

- 1 Strong Culture
- 2 Bilingual & Biliterate Programs
- 3 Blended Learning
- 4 Alternate Assessments & Credit for Proficiency
- 5 Next-Gen Project-Based Learning
- 6 Family & Community
 Engagement
- 7 Next-GenTeacher Professional Development
- 8 Data to Inform Instruction
- 9 Nex-Gen Digital Tools
- 10 Personalized Learning

For each element above, the following section provides an existing strategy, a forward leaning recommendation, an example use case (when applicable) and research that supports the element or a story that inspires.



Schools to Learn From: How Six High Schools Graduate English Language Learners College and Career Ready

A recent paper from Understanding Language, an initiative of Stanford University that aims to apply research-based approaches to language acquisition, reports the practices and successes at six public high schools with extraordinary academic outcomes for English Language Learners (ELLs). The six schools examined were chosen on the basis of stronger-than-average graduation and college-going outcomes for ELLs and include:

- Boston International High School and Newcomers Academy (Boston, MA)
- High School for Dual Language & Asian Studies (Manhattan, NY)
- It Takes a Village Academy (Brooklyn, NY)
- Manhattan Bridges High School (Manhattan, NY)
- Marble Hill School for International Studies (Bronx, NY)
- New World High School (Bronx, NY)

The researchers found that the schools shared the following values, which guided daily actions, decision-making and the student/family experience:²⁸

- The school puts forth an ambitious mission focused on preparing all students for college and career success
- The school mission guides all decisions
- The school holds a mindset of continuous improvement
- The entire school shares responsibility for students' success
- The school is highly attuned to students' needs and capacities
- There is a strong sense of pride and respect toward all cultures

All six schools conform to a three-part process "meant to ensure ELLs benefit from quality programs and service." These schools are grounded in sound educational theory, support their programs with a robust set of resources, have highly-skilled and supported professionals and employ mechanisms that enable educators to understand students' academic and social-emotional needs.

#1

STRONG CULTURE

Recommendation: Create a strong school culture utilizing a strengths-based approach for all learners.

Schools that prove successful in meeting the needs of ELLs utilize a strengths-based approach. They encourage students to bring their personal backgrounds into the curriculum, focusing on students' own experiences and culture as an asset to the overall school community. Throughout our interviews with school teachers and leaders, we heard about the importance of setting a culture of respect for all learners. Furthermore, research confirms that cultural relevance is important in ELL instruction. The tools teachers and students use need to prioritize relevancy.³⁰

A strategy to support ELLs should embrace multiple cultures and multiple languages. If your school or district redesigns to meet the needs of ELLs (and all students), consider: the ways in which you personalize the instruction to meet the goals of individual students; the ways in which your school utilizes an advisory or counseling program to support students; the ways in which your school involves families as fountains of knowledge and focuses on strengths-based learning.



Judie Haynes, ESL teacher of 26 years, said, "Students with Interrupted Formal Education (SIFE) often have extreme trauma. We need to teach with empathy and use a strengths-based approach, ensuring we are recognizing students' assets and capacities. I'd like digital tools to allow students to share their stories. Storytelling, creating artwork and/or using iMovie can allow students to share their experiences and then show what they know using digital portfolios."³¹

#2 BILINGUAL & BILITERATE PROGRAMS

Recommendation: Consider bilingual, biliterate and dual language programs including bilingual pre-K and kindergarten.

If we look at the broader implications and ask, "What is learning for?" we must embrace multiple literacies. Some school districts are moving towards having every student graduate biliterate and bilingual. We

should embrace this as an important goal, encouraging students to learn English and to continue growing fluency in their native language.



Highline School District Sets High Language Goals

The Highline School District in Washington State has set an ambitious goal that for the class of 2026, all students will graduate bilingual and biliterate. The school district's recent strategic plan states the following goals:

- Engaging the community to identify the best resources for teaching languages. Identifying clear objectives for individual and system-wide growth towards bilingualism and biliteracy.
- Creating language-learning courses and programs for all students, K-12, that ensure access to the global workplace, promote cross-cultural understanding and develop critical-thinking skills.
- Investing in technology, staff and resources to ensure strong bilingualism and biliteracy skills.
- Implementing well-supported language-learning programs with a long-term vision.³²

For more, listen to Bernard Koontz, Language Learning and Teacher Development Executive Director in Highline Public Schools on the Getting Smart podcast.

#3

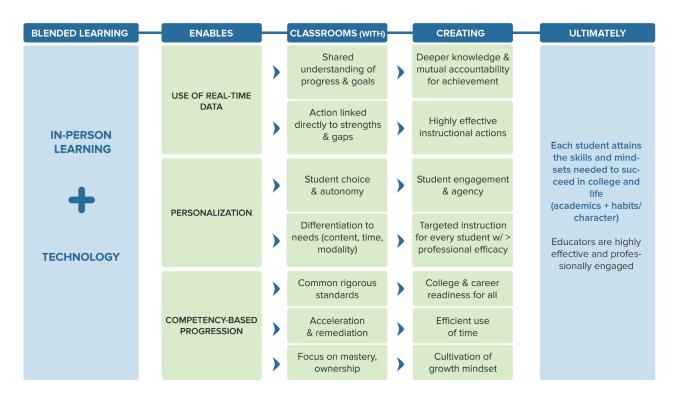
BLENDED LEARNING

Recommendation: Move towards blended learning with high-quality tools to support all learners.

As defined by Christensen Institute, "Blended learning is a formal education program in which a student learns: at least in part through online learning, with some element of student control over time, place, path and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience."³³

Consider this framework on blended learning and visit The Learning Accelerator for up-to-date information on blended learning. The following framework takes The Learning Accelerator's vision of blended learning, defining terms, practices and desired outcomes.³⁴

Blended learning is transforming classrooms across America through a mix of in-person instruction and digital technologies. Many digital tools profiled in the Tools & Solutions section of this paper are used in blended learning environments.



Source: The Learning Accelerator. http://learningaccelerator.org/blended-learning/blended-learning-framework





Tech Integration In The Classroom

"Rigorous curriculum and a strong focus on culture are the cornerstones of our approach to language acquisition. So we started thinking: What if we used the same model to create digital curriculum modules that challenge students through meaningful activities and authentic cultural materials? ... We thought that ELLs would thrive when challenged beyond their current English-speaking capabilities and would connect with the interactivity of the courses.

Our in-house academic team worked with outside ELL experts—including Dr. Jim Cummins of the University of Toronto—to develop the framework of the new curriculum. But, recognizing the programs needed to be effective in classrooms; we worked side-by-side with ELL teachers and school administrators in the Hartford Public Schools (HPS) to develop the curriculum and a pilot in 10 schools.

Over the first year of the program, we heard from the teachers about the culture change in the cohort of students enrolled in the 300-student pilot program. In a big shift from typical ELL attendance rates, students almost universally showed up for class—and were more attentive, engaged and ready to learn, according to their teachers. What's more, parents of ELLs in the program started to take a deeper interest in the education of their children. HPS teachers said that parents' nights at the school, which historically only drew a couple of attendees, had become standing-room-only affairs. Additionally, many parents became very familiar with the schoolwork their children were completing.

Since we know that anecdotal accounts only tell part of the story, we commissioned a third-party assessment of our ELL courses to see if we could begin to quantify the benefits of the program ...The assessment, conducted by the Johns Hopkins University Center for Research and Reform in Education (CRRE) over the 2014-2015 school year, showed that both students and teachers gravitated toward the culturally authentic videos, gamification and other digital activities embedded in the courses.

The impact on the schools' learning culture has been very positive ... Digital tools, when paired with strong curriculum and well-supported teachers (and sound public policy) have significant promise for closing the ELL achievement gap and putting more non-native English speakers on the path to success. Please visit middleburyinteractive. com for more information on our courses, to see a course demo and to read testimonials for our ELL programs."

From "Rising to the Challenge: Digital Tools, Rigorous Curriculum Key to ELL Success" by Jane Swift, the CEO of Middlebury Interactive Languages and the former Governor of Massachusetts.

ALTERNATE
ASSESSMENTS
& CREDIT FOR
PROFICIENCY

Recommendation: Develop formative and alternate assessments such as performance-based assessments and competency-based progressions.

ELLs participate in state tests similar to their native English-speaking peers. Many ELL teachers and advocates suggest formative and performancebased assessments for gauging English language acquisition. Some students come into an American classroom with a strong background in reading, writing and speaking in their native language. Increasingly, systems across the United States give credit for proficiency in another language. In South King County in Washington State, for example, the Road Map World Language Credit Program sought to provide credits for students' proficiency in another language. The program awards "up to four high school credits—the equivalent of four years of classroom language study—to students who demonstrate, in a standardized test, their ability to speak, understand, read and write a language other

than English.³⁵ A study conducted to analyze the impact of this program found:

- » Students recognized the personal, cultural and social value of bilingualism. Students were proud of being bilingual.
- World language credits gave students choices and the chance to graduate on time.
- » Receiving credits made students confident about being bilingual.
- Attitudes toward school did not change for most students. A small number of participants said that receiving credits helped them realize that their school valued their bilingualism and provided them with an opportunity to benefit from what they already knew. Others said that the program made up for the fact that their school did not support or teach their specific home language.³⁶



Tech Integration in the Classroom

"English Language Learners (ELLs) are a diverse group of students with unique assets and varying factors affecting academic performance. Many educators need support in reaching ELLs and teaching academic language, yet they often don't know where to start. By implementing more formative assessments for ELLs with the appropriate language supports, teachers can better understand their students and become stronger teachers of academic language. After all, all teachers are indeed language teachers."

Formative Assessment Ideas

- Journals or learning logs to show growth over time in a portfolio
- Academic conversations to explain new learning
- Cornell notes or graphic organizers to structure note-taking
- Student-teacher conference or small group discussions to recount learning
- Exit slips to show "I think...", "I wonder...", "I still want to know..."
- Fill-in-the-blank or "cloze" activity using sentence frames
- Reciprocal teaching
- Recording student language through technology
- Drawing or role-playing
- Gallery walk of student work where students give each other feedback on sticky notes
- Word or concept sorts based on unit themes or student-created categories
- One-word or one-phrase responses using whiteboards
- Self checklist or peer checklist
- Label or sequence visuals like pictures, photos or realia (real life objects)
- Student-generated questions for peers

For more, see "Supporting English Language Learners with Formative Assessments" by Sarah Ottow, director of ELL Confianza, an organization that promotes actionable, research-based schooling practices that increase access to high standards and equitable outcomes for English Language Learners.

#5

NEXT-GEN PROJECT-BASED LEARNING

Recommendation: Utilize high engagement strategies, such as projectbased learning, that utilize relevant applications for learning language.

ELLs, like many students, benefit from high engagement strategies such as project-based learning (PBL). The idea of building vocabulary and schema is one way in which ELL students really benefit from PBL. Projects allow students to experience through creation, therefore pulling knowledge that they already have—despite the language.

Teachers need to be very intentional and thoughtful as to how scaffolding comes into play, from the initial explanation of the project to the student's presentation of his or her work. For example, presenting can be terrifying for ELL students, which is why teachers should have a plan to help ELLs practice and prepare (start with the individual, then practice in pairs, then small groups, etc.). Students

can use language to present to an audience, and content is embedded.

To avoid the tendency to simplify rather than amplify the curriculum for ELLs, tools and resources exist from Understanding Language at Stanford. It is important to recognize project-based learning as authentic instruction, and integrating project-based learning and collaborative discourse can be a positive experience for ELLs.

Suzie Boss and John Larmer, authors of *PBL* for the 21st Century, offer insights from their book in order to utilize PBL to engage and teach ELLs: "Projects offer English Learners an ideal context to improve communication skills across all four domains of reading, writing, speaking and listening." ³⁷



Sache Crouch, ELL teacher for Shelby County Schools in Memphis, Tennessee, says, "Using PBL in my ESL classroom has proven to be an effective strategy. It allows me to focus on the required standardsbased content, and it requires interest from my students. It relates to something meaningful and useful in their lives."



An ELL Teacher Explains the Benefit of Project-Based Learning

Anny Fritzen Case offers strategies for how to tap into social interactions between ELLs and native English speakers in the classroom. Such practices support and encourage diversity as opposed to avoiding interactions because they can feel superficial or strained. She recommends:

- Embrace the interactional challenge by "openly acknowledging that interactions among students who don't share a language may be peppered with awkward moments, [which] prepares students to accept and work through the struggle."38
 Walk students through scenarios in which interactions could break down, and brainstorm solutions. Allow students to debrief their experience.
- Cultivate a first-person perspective by encouraging native English students to know and understand ELLs on a personal, individual level.
- Choose projects that require more than just reading and writing, but also involve creating art, acting and using technology, ultimately inviting multicultural perspectives.
- Balance structure and flexibility to accommodate the challenges that can arise when ELL and native English speakers collaborate on projects.

Fritzen Case encourages teachers to step outside their comfort zone. "By encouraging honest communication, a person-first orientation, multimodal tasks, and a balance of structure and flexibility, educators can help students learn to interact generously and respectfully with peers from different backgrounds." 39

FAMILY & COMMUNITY ENGAGEMENT

Recommendation: Encourage the development and application of tools that inspire and allow for strong parental and community involvement.

In communities across the United States, schools, organizations and groups are coming together to support English Language Learning as well as bilingual and dual language options. Within populations where parents do not necessarily speak English, schools can provide translation tools and translators. Some schools even create welcome centers for parents and family members. These can serve as gathering places where families also learn English.

In some communities, there are initiatives underway to ensure that students learn English and also continue learning one's native language. OneAmerica is working towards creating an education system that "values the assets that linguistically and culturally diverse families bring to our classrooms and communities."

On the digital tech side, applications such as Class DoJo and Remind have translation tools for families to keep in better communication with schools and classroom teachers. (For more on Class DoJo Translate, see this article. For more on Remind Translate, see this article.)

In her article, "Getting to Know ELLs' Families," Lydia Breiseth identifies "eight ways to build relationships based on trust and respect with students' families."⁴¹

- » Be a creative communicator
- » Think outside the box for ways to meet
- » Make the family comfortable
- Look for clues about what brought the family here
- » Get a sense of the home situation
- » Invite parents to share information about their child
- » Let parents share interests and talents
- » Share successes



Engaging with English Language Learning Families

For educators, engagement with parents of English Language Learners (ELLs) may look different than it does in traditional classroom settings because of perceptions around language and cultural differences. English as a Second Language (ESL) teachers must embrace opportunities to create inviting environments that allow parents to participate in their children's education in diverse ways. In the words of one ESL teacher, "It's not just about fundraising and showing up to parent nights."

Below find four suggestions for inviting collaboration and engagement with the families of ELLs.

- (1) Adopt a growth mindset
 - Rethinking your own mindset and the ways you view the circumstances of English language learners and their families is an important start.
- (2) Honor cultural differences
 - Get to know students' parents.
 - Learn about the different cultural norms of your students.
 - Directly communicate to parents your support for their children and respect for their cultures.
- 3 Don't fret over language differences
 - Use straightforward language and avoid jargon.
 - Invite native language speakers to join discussions on grading, testing and report cards.
 - Arrange student-led conferences.
 - Use community or school resources to support translation needs.
 - Give hands-on demos at back-to-school nights.
 - Encourage L1 reading in home settings to promote first language literacy and second language acquisition.
- (4) Be creative about logistics
 - Plan ahead when possible.
 - Meet parents at their home or workplace.
 - Engage parents virtually through Skype, Twitter or WhatsApp. Arrange for child care at school events.

It takes time and effort to nurture relationships with the families of ELLs. But as parents come to understand you as an advocate for their child's success, your investment will pay off.

For more, see "4 Parent Engagement Strategies for English Language Learners" by Meriwynn Mansori of VIF International Education.



Engaging English Language Learning Families with a Culturally Responsive Approach

Cincinnati Public School's English Language Learning program is a nationallyrecognized example of parent and community engagement that grew out of necessity. Teachers saw successes with students using blended world language instruction, yet they identified a real need to extend those learning opportunities beyond the classroom walls to boost English language acquisition not only for students, but for their families as well. Their unique and inspired solution includes parent "coffee hours" during which families can come into the school, practice speaking English and use Rosetta Stone with a teacher's support. Cincinnati Public Schools and Rosetta Stone have also made the program available to families for home use on their computer or mobile device. An added bonus of this initiative: Simultaneously, students and their families also learn computer literacy skills. When teachers and leaders realized that issues like turning on a computer, using a mouse and performing basic troubleshooting were key barriers to using the language tools, they set up opportunities to train families in these skills as well. The program is really a win-win-win. Students learn English. Teachers gain improved parental engagement such as increased attendance at parent-teacher conferences, more homework support and better relationships with parents in general. Parents and extended families learn English, feel more connected to their students' lives in school and gain important 21st-century skills that support their own personal and professional growth. The program also serves as a great example of creative funding solutions. This particular program was funded through Ohio's Straight A Fund—an innovation grant program to inspire next-gen learning opportunities in Ohio's schools.

#7

NEXT-GEN TEACHER PROFESSIONAL DEVELOPMENT

Recommendation: Create opportunities for high-quality teacher professional development.

Widespread and universal agreement exists among teachers and the education field at large that professional learning proves an essential component of ensuring student success for all student populations.

Even amid rapid changes in instructional models and growing diversity among student populations, many teachers are still stuck participating in professional development opportunities that better matched the needs of yesteryear.

There is growing awareness of the potential of personalized learning models for teachers. "Preparing Teachers for Deeper Learning:
Competency-Based Teacher Preparation and Development" describes how the role of teachers experiences changes amid broader shifts to personalized, blended and Deeper Learning.
Authors from Getting Smart and Digital Promise argue that, in order for the teaching field to create and sustain personalized learning environments, professional learning for teachers has to evolve as well. A 2015 follow-up to this project reached similar conclusions for leadership preparation and ongoing professional development.

In short, educators deserve the same blended, competency-based, Deeper Learning opportunities that their students do, including:

- "Some element of teacher control over time, place, path and/or pace;
- » Balance between teacher-defined goals, goals as defined by administration through teacher evaluation efforts, and school and district educational goals;
- » Job-embedded and meaningful integration into classroom practice; and
- Competency-based progression."⁴²

This next generation of professional learning will enable better alignment to specific teacher needs. While all teachers would benefit from this type of personalization, professional learning proves absolutely essential for teachers who serve unique student populations. One example is educators who serve ELLs.

ELLs face the unique learning challenge of developing skills and content mastery while simultaneously acquiring a new language—often when their native language is not yet fully mastered. This means that teachers must also simultaneously meet these instructional goals.

"Between 75 and 86 percent of all teachers surveyed in Los Angeles said they wanted more ELL-focused professional development; the teachers with the least experience expressed the most need, which tends to confirm that pre-service teachers still don't receive enough training relevant to teaching ELLs. When we asked teachers what would be most useful in addressing their challenges, their areas of greatest need involved things they did not have time to do: observe other highly effective teachers, work with a mentor or coach and participate in a professional learning community." 43

Patricia Gandara and Lucrecia Santibanez add additional emphasis to the teachers' need for support from leadership. "One surprising finding of the 2015 survey of teachers in Los Angeles was the almost nonexistent role that school principals played in providing support for new teachers of English Language Learners. When asked to think back to the first time they taught ELLs and to choose what had most helped them deal with the challenges they encountered, teachers chose the support of their principals last. The literature is clear that concerted, school-wide efforts are needed to create settings where ELLs can thrive. To do this, schools need inspired school leaders who can engage parents and support teachers in meeting the challenges of teaching English Language Learners."44

In "Teacher Development to Support English Language Learners in the Context of Common Core State Standards", authors Santos, Darling-Hammond and Cheuk further describes this challenge, "While supporting access to content, teachers of ELLs are called upon to accelerate English language development and literacy and, in bilingual classrooms,

native language and literacy development. Thus teachers need to know how to create classrooms that are supportive of using and learning language. Such classrooms benefit all students and are essential for ELLs."⁴⁵ They go on to recommend that teachers must learn to:

- "Build opportunities for students to learn language and content from each other through purposeful, carefully structured and scaffolded tasks;
- » Create engagement and discussion opportunities that socialize students to the language of the discipline through structures and routines that develop skills in the disciplinary discourse;
- » Carefully organize groupings (pair, small group and whole group) in classrooms to amplify and enrich the opportunities for comprehension, discussion and interactions with ideas;
- Consider a student's language proficiency and native (home) language when organizing students in groups for the purposes of learning (mixing diverse proficiency levels of the same native language) and production (mixing students from diverse native languages).
- Take advantage of the assets of diverse students by understanding students' language skills and their culture, background knowledge and experiences."⁴⁶

Bright spots in the field include many of the digital tools listed above that do also offer high-quality professional development such as Ellevation, ELLoquence, ELL Confianza and VIF International Education, which has a virtual professional learning community where teachers share resources in addition to curriculum and modules for teaching ELLs.



"When asked what they want for their children, parents and community members overwhelmingly agree that they want the best teacher possible in every classroom. Research confirms that the most important factor contributing to a student's success in school is the quality of teaching ... Professional development is the most effective strategy schools and school districts have to meet this expectation."

For more, see "Why Professional Development Matters" by Stephanie Hirsh of Learning Forward.



Supporting All Teachers to Be Teachers of English Language Learners

We interviewed Joe Luft, Executive Director of Internationals Network for Public Schools, an organization supporting a national network of schools (mostly high schools) and academies for recently arrived immigrants who are English Language Learners (ELLs). The organization's mission is "to provide quality education for recently arrived immigrants by growing and sustaining a strong national network of innovative international high schools, while broadening our impact by sharing proven best practices and influencing policy for English Learners on a national scale."⁴⁷

Joe says, "At Internationals Network, we take a broad view of professional development. We think about this from an asset-based approach, a growth mindset approach. We all need to remember that multilingual learners are bringing with them important linguistic and cultural knowledge as well as varied life experiences. Teachers need support to see those things as assets and to see ways to validate them and recognize them as a foundation for growth.

The idea of the team approach to professional learning is really important. It's a model for adult learning in that teachers who have not been trained as ELL teachers are collaboratively developing the expertise to meet the needs of students; we take a highly collaborative project-based learning (PBL) approach in the classroom with students, and it mirrors the way we believe teachers learn best as well."⁴⁸ For more see, "Supporting All Teachers to Be Teachers of ELLs."

#8

DATA TO INFORM INSTRUCTION

Recommendation: Connect high-powered digital tools with professional learning for teachers.

There is a wealth of rich, technological tools available for instruction, but such tools need teachers who can adapt to using them effectively in the classroom. If great changes in education genuinely happen in the classroom, between teachers and students, then tech tools need to provide specific professional development learning for teachers. In simple terms, a tech tool can only do a finite number of things; teachers have to know how to extract data and use the tool effectively. Ensure teacher professional development that shows teachers how to use data to inform instruction, specifically matched to tools.

Speaking about professional development, Judie Haynes says, "A digital tool is great if the teacher is trained to use it properly. There are great tools to enhance their language; you can create language and hear it back. Anything that is rote is not a great teaching tool. It can be OK for homework, but it should not be the key instruction for the day. A lot of that comes down to professional development. Students have to create. Students need to be doing real learning, not rote learning."



IDEA Public Schools Has Success with SIOP Virtual Training for Teachers

Teachers from IDEA Public Schools participated in SIOP (Sheltered Instruction Observation Protocol). The new SIOP Virtual Training for Teachers is an online, interactive workshop that will help educators enhance instruction for English Language Learners (ELLs). This four-week institute consists of 11 sessions in which participants complete a series of assignments on their own schedule in addition to meeting as a virtual group to collaborate, discuss and share information with their colleagues. An expert in the topic leads the four live sessions, and one session is devoted to a question and answer session with the authors.

All virtual institute participants receive electronic resources and an e-book from our best-selling series "The SIOP® Model Series" to support their learning. The SIOP Virtual Training for Teachers is a cost-effective option that offers educators the opportunity to experience professional development with leading authors and experts, completed on their own schedule, with no travel required, while still receiving high-quality instruction and guidance. Tricia Lopez, Director of Special Education, says, "As a result of SIOP training for teachers, scores on the State of Texas Assessments of Academic Readiness (STAAR) for ELL students rose by double digits over the past two years—faster growth than for any other subgroup of students in the IDEA Public Schools network. IDEA is proving that when given the right supports, all students—no matter their background or first language—can learn and succeed."⁴⁹

Conclusion

#9

NEXT-GEN DIGITAL TOOLS

Recommendation: Encourage investment in tools at various stages of development and in various types of supports.

The product roadmap of any next-gen tool includes various stages of development: basic research, applied research, product development and market development. Investments in digital tools that have already conducted basic and applied research can give a tool a big boost to reach more users.

As with any new tool or application, defining the user in terms of specific learners, their age and language learning abilities can be very important.

For example, some tools have been geared specifically toward younger students (such as vocabulary builders), while other tools could be used with people in the Army.

As technology advances, a next-gen tool that utilizes a combination of machine learning, voice recognition and natural language processing may yield new applications.



Teachers Know Best

Teachers Know Best provides industry-leading information about the state of K-12 resources from the perspective of teachers and students. With better insights, teachers can help EdTech entrepreneurs build more effective digital products and, as a result, improve our nation's education.

The Bill and Melinda Gates Foundation partnered with IDEO, a global design and innovation firm, to create the vision and design for Teachers Know Best, a platform to connect EdTech entrepreneurs more directly to the needs of teachers and students.

Highlights from the work:

Teachers want more and better resources for every grade level and across every subject area. In fact, only 59 percent of teachers believe that the products they use most frequently in classrooms make the grade—sufficiently serving students' learning needs.

The vast majority of teachers believe EdTech resources have the potential to be effective at supporting instructional strategies to meet students' learning needs.

Teachers rate ease of use to be a primary factor when considering digital products.



Automated Writing Feedback

One EdTech investment could include research and development in automated writing feedback and machine learning.

A 2012 case study found that one reason that teachers may assign essays infrequently stems from the grading of them being both time consuming and increasingly difficult. If a typical teacher instructs a single class of 20 to 30 students, and—in some cases—those same teachers carry two to four of those classes, a single long-form essay assignment of 1,000 words can generate between 100 and 600 pages of written material. Asking teachers to read, grade and provide substantive feedback on each one represents a formidable commitment of time and attention.⁵⁰

For 15 years, a handful of companies have offered automated essay scoring. Studies have demonstrated how scoring software can replicate trained graders, making it useful for testing situations. Perhaps even more importantly, these same scoring engines can provide useful formative six-trait writing feedback.

Jeff Pense, a Canton, Georgia, English teacher, assigns 28 essays each year to his 130 middle school students. He notes, "Each one of those was submitted for assessment an average of six times, so that's well over 20,000 drafts that were assessed and graded, just for my classroom. There's no teacher who could do that." Pense uses Pearson's WriteToLearn to provide formative feedback to students. WriteToLearn supports English Language Learners (ELLs) with writing prompts and feedback that focus on the fundamentals of writing including language usage, sentence structure, mechanics and ordering of ideas.

The PEG Writing feedback system users report that they don't have to spend as much time on the mechanics of writing such as spelling, capitalization, punctuation, etc. Instead they can focus on more substantive skills such as organization, elaboration and development of ideas.

PEG is licensed statewide in North Carolina as NC Write and used extensively in Durham Public Schools. Like NC Write, Utah Compose offers a writing solution for the state of Utah. Last year, it scored more than 3 million essays. PEG is also used by more than 136,000 secondary students through a Texas Education Agency pilot program (representing all 20 regions, 100 districts, 250 schools) with large percentages of English Language Learners.

Dr. Joshua Wilson, University of Delaware, has found significant benefits with the use of writing feedback systems for students with disabilities, finding results "encouraging, showing that students with disabilities grow at a more accelerated rate than their typically-developing peers and actually close the gap." Wilson will be evaluating PEG use by Texas English Learners.

Pearson recently launched TELL (Test of English Language Learning), a table- based assessment with an interactive, fun interface for screening, diagnosing and monitoring ELL student progress. It integrates automated scoring of writing and speaking technologies and uses tablet features to support interactive activities including reading short texts out loud, listening to instructions, interacting with pictures, watching and describing videos and retelling stories.

A 2012 study evaluated Criterion Online Writing Evaluation Service by ETS in a college-level psychology course found a significant reduction in the number of article errors in the final essays of the non-native speakers.

"We use Criterion as an integral part of a comprehensive and coordinated plan to improve student writing across campus," says CSU Fresno faculty. "This online program gives students the opportunity to rewrite and reduce the distractions in their papers so that professors can focus on the quality of content and evidence in written assignments. Many students, especially English Language Learners, find that the immediate feedback helps them gain a better understanding of grammatical features in writing."

With recent ELL enhancements, efficacy studies of writing feedback systems would be valuable to the sector.

#10

PERSONALIZED LEARNING

Recommendation: Adopt personalized learning to ensures that specific student groups have specific supports.



"Our school uses blended learning practices, and we allow for students to learn at their own pace. All students at our school have a device. Our students use Imagine Learning as a language intervention program which has good assessment and reporting tools for teachers. They use a variety of language websites as well as iMovie for projects and to monitor reading progress and fluency." For more see, "5 **Best Practices for Supporting** Refugee ELL Students."

In a recent review of the impact of personalized learning in schools, personalized learning was described as:

Systems and approaches that accelerate and deepen student learning by tailoring instruction to each student's individual needs, skills and interests. Students have a variety of rich learning experiences that collectively will prepare them for success in the college and career of their choice. Teachers play an integral role by designing and managing the learning environment, leading instruction and providing students with expert guidance and support to help them take increasing ownership of their learning.⁵¹

Personalized Learning includes:

- Personalized learning paths
- Competency-based progressions
- » Flexible learning environments

As noted above, ensuring that students work with language as comprehensible input at their pace and receive credit for mastery and proficiency as they work will help create a more personalized approach to English Language Learning. Supporting policies and strategies that allow students to work at home, at school and in place-based learning will also create relevant and engaging learning opportunities for language acquisition.

CONCLUSION

Like all students, ELLs benefit from better access to technology, personalization tools and blended learning models. They will also benefit from the longer transition to competency-based education, where students progress based on demonstrated mastery. While gains have been made to better accommodate the specialized needs of ELLs there are still several gaps that remain and must be addressed: an adoption gap, a standards gap and an invention gap.

Adoption Gap

Writing feedback systems have steadily improved over the last 15 years but are not widely adopted as a result of poor user experience, weak access to technology and teacher skepticism about computer scoring. However, secondary student access to technology is showing dramatic improvements, which suggests that demand aggregation strategies would be timely and effective. Pilot projects in high ELL districts would demonstrate use cases and product efficacy. Documenting use cases, conducting efficacy studies and providing incentives for system adoption are productive approaches to closing the adoption gap.

Standards Gap

The sector needs a common method for combining formative assessments to verify progress in language acquisition. Like world languages (i.e., Spanish-speaking students earning AP credit), ELL proves a perfect entry point for competency-based learning. A badge sequence based on multiple forms of assessment would be useful and would encourage extended learning opportunities.

Invention Gap

The biggest opportunity in language acquisition is a smart personal agent—one that combines machine learning, natural language processing, computer vision and voice recognition to provide live feedback on conversation skills (regarding vocabulary, pronunciation and grammar), and six-trait writing feedback. Such an app would combine several of the product categories above, could be used across curriculum and in support of informal learning.

Recommendations

A growing commitment to language fluency in multiple languages demands increased investment in language tools and content. In addition to addressing the gaps above, EdTech investors and developers, school and district leaders, policy makers, and educators should prioritize alignment of high-quality instructional materials with rigorous state standards and apply the following research-based recommendations to positively impact ELL achievement:

- » Create a strong school culture utilizing a strengths-based approach for all learners.
- » Consider bilingual, biliterate and dual language programs including bilingual pre-K and kindergarten.
- » Move towards blended learning with highquality tools to support all learners.
- » Develop formative and alternate assessments such as performance-based assessments and competency-based progressions.
- » Utilize high engagement strategies, such as project-based learning, that utilize relevant applications for learning language.
- » Encourage the development and application of tools that inspire and allow for strong parental and community involvement.
- » Create opportunities for high-quality teacher professional development.
- » Connect high-powered digital tools with professional learning for teachers.
- » Encourage investment in tools at various stages of development.
- » Invest in technologies, including automated writing feedback and machine learning, and commit to evaluating their ongoing efficacy.
- » Adopt personalized learning to ensure that specific student groups have specific support.

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- » WriteLab
- » Writelike
- » Zearn
- » Zeal

APPENDIX

Glossary

The following definitions may be useful as we define strategies and tools to support ELLs.

Bilingualism: The ability to communicate successfully in two languages, with the same relative degree of proficiency. It is important to note that bilinguals rarely find perfect balance in their use of two languages; one language is usually dominant.

Biliteracy: The ability to communicate and comprehend thoughts and ideas using grammatical systems and vocabulary from two languages, as well as being able to write in both languages.

Dual Language: A form of bilingual education in which students are taught literacy skills and content in two languages.

ESLs and ELLs: English as a Second Language (ESL) is a term often used to designate students whose first language is not English; this term has become less common than the term ELL. Currently, ESL is more likely to refer to an educational approach designed to support ELLs.

ENDNOTES

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