

A Language Proficiency Test that Works

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Abstract

Either out of inadequate technology or for the sake of convenience, most language proficiency tests tend to oversimplify students' diverse needs and provide one size fits all reports. Take the Oxford Young Learners Placement Test, for example. This test includes two sections, namely listening and language use. The latter combines grammar, vocabulary, and language function. A student gets a final score and a corresponding Common European Framework of Reference (CEFR) level at the end of the test. However, such a generic result cannot provide any insight into individualized learning solutions. Consequently, it is of no use for young English language learners (ELLs) in non-English speaking environments. To address this gap, we believe a language proficiency test that truly works should be solution-based, which provides personalized guidance in the service of learning improvement.

Keywords: personalized, efficient, accurate

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Introduction

As one of the fast-developing online language education startups in China, we found that current language proficiency tests do not work in guiding learning. As is known, China now has the most significant number of ELLs in the world, who have to take English language proficiency tests to access higher or privileged education. However, current language proficiency tests oversimplify students' diverse needs and provide one-size-fits-all reports. Take Cambridge Test, for example. Each student will get a final score and a corresponding CEFR level at the end of the test. Similar examples are the APTIS and the TOFEL junior test, which also fail to provide diagnoses in detail. Although test-takers receive scores and corresponding CEFR levels in each skill domain, those judgments and descriptions are still one-size-fits-all. In other words, test-takers with similar skill levels do not know what exactly the differences in their language capacities are, and they do not know what learning solutions to come next either. Current language proficiency tests, as we see, also fails to provide learning solutions.

On the meanwhile, for many years, it is the curriculum designers that are providing learning solutions for test-takers. However, most learning solutions provided by curriculum designers are also one-size-fits-all. Over 90% of students of different language proficiency levels in China are taking the same curricula. We think it is time to change.

The change starts with standards. In the past and now, language proficiency tests are designed based on language standards, such as CEFR, CSE (Chinese Standards of English), test-takers get reports that indicate levels and descriptions without learning solutions. Meanwhile, curriculum designers are busy with providing one-size-fits-all learning solutions based on the standards on which the tests are based. The problem is that the solutions provided by curriculum designers do not always meet the diverse demands of test-takers. The effective learning solutions should meet the diverse demands of test-takers and target learners' strengths and weaknesses. To achieve this goal, it is test-developers' responsibility to bridge the gap and provide individualized learning solutions that target at test-takers' strengths and weaknesses.

Main Body

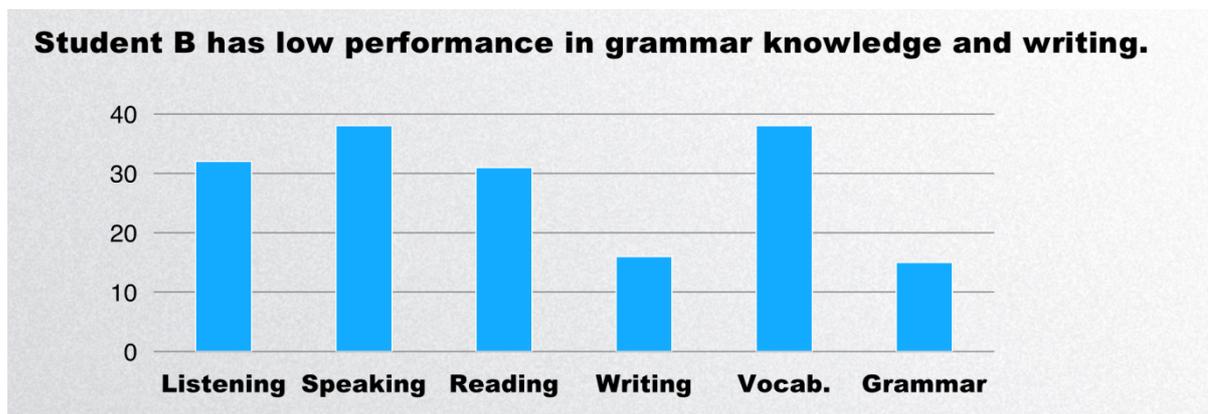
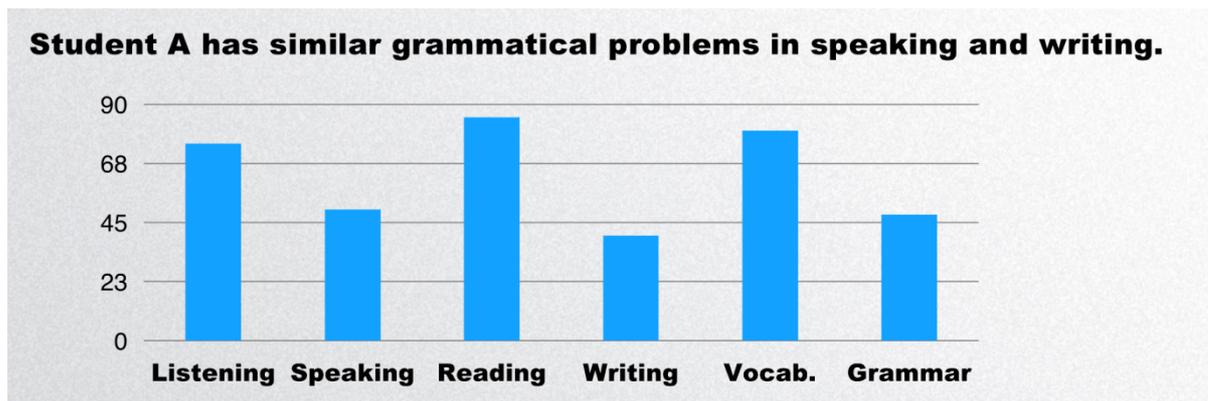
To design a proficiency test that provides individualized learning solutions, we set up standards including language knowledge and language skills based on CEFR and CSE, and we are also designing a computer-adaptive test based on this standards. Tailored learning solutions that target at test-takers' weaknesses are provided at the end of the test.

The Standards

Based on CEFR and CSE, we select the most frequent words and grammar knowledge in daily use and in language tests such as the Cambridge Tests for Young English Learners and the TOFEL Primary Tests. We also establish standards for reading, listening, writing and speaking, which specifically target at Chinese young ELLs' demands for academic or communicative purpose.

The Test

First, a solution-based language proficiency test provides comprehensive diagnoses. In contrast, language knowledge is underrepresented in reports of current language proficiency tests. In these reports, vocabulary and grammar knowledge is always absent. We believe a solution-based language proficiency test provides specific and constructive diagnoses all around. There has been already much research proving the disadvantages of not testing grammar separately. As Purpura (2004) says, we have no way of knowing what grammatical difficulties learners might experience and providing feedbacks if we test grammar within the reading, speaking, writing, or listening tests. Although whether testing grammar separately yet remains a controversial issue, as an education start-up that has over 20 million strings of learning data, we found the advantages of testing grammar and vocabulary separately from language skills. Based on several pilot tests on a sample of 156,221 young English learners aged from 4 to 12, we find young ELLs have various language acquisition paths both in language knowledge (vocabulary and grammar) and skills (listening, speaking, reading and writing). For instance, learners' grammar knowledge is not always in sync with their lexical range. For any individual, each aspect of the test results may fall into different categories, sometimes with an enormous gap. Two cases are shown below:



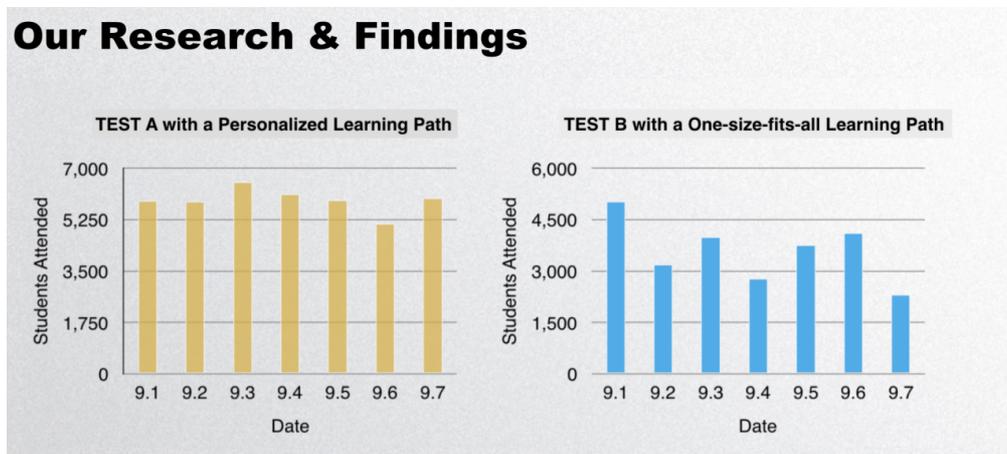
In case one, students A has similar grammatical problems in speaking and writing. These repeated problems are third-person singular, running-on sentences, and sentence fragments. In case two, student B has low performance in grammar knowledge and writing.

We found out it is always the similar problems that impede student A’s performance in speaking and writing; it is a lack of grammatical knowledge, not vocabulary, that leads to student B's low performance in writing. We have a considerable amount of data that makes us believe testing grammar and vocabulary separately helps us know exact difficulties ELLs may experience in reading, writing, speaking, and listening, and provide detailed feedback. The data also indicates that solutions provided by many test developers might be either too general or unreliable because learners' vocabulary and grammar levels are usually underrepresented or assumed identical to their four skills.

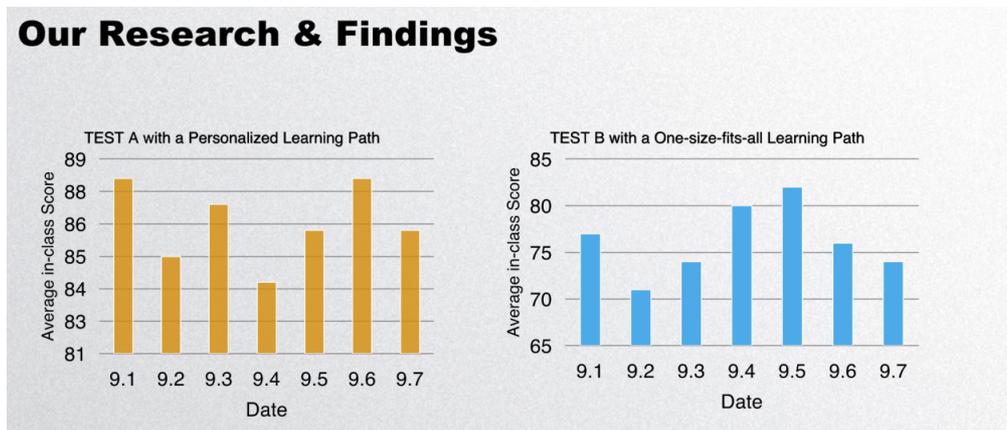
Second, a solution-based language proficiency test provides tailored learning paths. Current language proficiency tests are judgment-oriented. As said before, a learner cannot get any learning insight from a CEFR level or a score, or any general level descriptions. We believe a solution-based language proficiency test is learning-oriented and provides learners with the exact daily or monthly plans, including what they still have to learn. For example, on our platform, our students, after test, are expected to be provided with a personalized learning solution per day based on their weaknesses and interests.

In the meanwhile, we are always trying to find out how a personalized learning path impacts students' learning behavior and results. From our A/B tests, we found with a personalized learning path, student attendance rate is more stable, while in-class performance (exercise scores and engagement) is better than those with a one-size-fits-all learning path.

Our Research & Findings



Our Research & Findings



Third, A solution-based language proficiency test predicts what to learn next. Current language proficiency tests roughly report what learners are already capable of. As we see from a TOFEL Primary test report, students only get a list of *can do*. *Can do* is not the start point for learning. Instead, *cannot do* is. Therefore, we believe a solution-based proficiency test predicts what to learn next. For example, a test-taker, after the test, is immediately provided a report which indicates the 497 words, 22 grammar, 20 reading skills, and 13 writing skills he or she has to learn next.

Take vocabulary test, for example, based on 156,221 students' performing data on 1300 most frequent words for young ELLs, we analyze and calculate the correlation between words. The result helps us find "Benchmark Words" (BMWs), which can represent a group of words thematically or semantically related. For example, students who know the word elephant always also know words such as cat, dog, pig, to name a few. Our research and findings tell us, benchmark words enable efficient predictions of learners' strengths and weaknesses in lexical resources. The finding of BMWs shortens test time by 91.23% within a maximum deviation rate of 14.78%, which means the accuracy rate is expected to be 85.22% or even higher. Learners' strengths and weaknesses are reported in vocabulary volume, and themes within just 5 minutes.

The Solution

Test-takers are going to receive their overall language proficiency levels based on the standards we set. They are also going to receive detailed reports which indicate what to do next in terms of vocabulary, grammar, reading, listening, speaking, and writing. For example, how many vocabulary words to learn and how many skills they still need to improve in reading, listening, writing, or speaking.

Conclusion

Based on the fact that current language proficiency tests for ELLs are either lack of solution or too time-consuming. We believe each ELL deserves an efficient while accurate language proficiency test. Each ELL also deserves a tailored learning solution rather than an oversimplified skill level. It is test-developers' responsibility to design a solution-based language proficiency test.

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Appendix A

ACademy English Standards for Young English Learners

	AC1	AC2	AC3	AC4	AC5	AC6	AC7	
GSE	Pre-starters	GSE 1	GSE 1-2	GSE 2	GSE 2-3	GSE 3	GSE 3-4	
CEFR	Pre-A1	Pre-A1	Pre-A1-A1	A1	A1-A2	A2	A2-A1ET	
YLE	Starters	Starters	Starters-Movers	Movers	Movers-Etner	Etner	Fluency-ET	
参考对应公立年级	n/a	1-2	2-3	4-5	5-6	6-7	7-8	
新课标		一-二	二-三	三-四	四-五	五-六	五-六 (初中2-3年级)	
CCSS	PK-K	1	1-2	2	2-3	3	3-4	
Listening 28	Overall	Basic listening Candidates will be able to understand letters, simple words and basic greetings. Have basic phonemic awareness.	Listening for communication Candidates will be able to understand limited words and phrases with visual/gesture support and repetition.	Listening for daily information Candidates will be able to extract main/detailed information from simple statements and daily conversations with visual/gesture support and repetition.	Listening for daily information Candidates will be able to extract information from a variety of daily contexts (e.g. conversations, directions, and short stories) with visual support. Speech is very slow.	Listening for knowledge Candidates will be able to extract information from a variety of daily and formal contexts (e.g. conversations, directions, descriptions, stories, and speeches) with less help visual support and make inferences. Speech is slow.	Listening for knowledge Candidates will be able to extract information from a variety of daily and formal contexts (e.g. conversations, directions, descriptions, stories, and speeches) with less help visual support and make inferences. Speech is almost natural.	
	Key Words	letter simple words	words/phrases visual support slow speech repetition detail	simple sentence visual support slow speech repetition detail	sentences/conversations visual support slow speech Main idea/detail	sentences/paragraphs less visual support main idea/detail/inference Slow speech	paragraphs/presentation less visual support natural speech logic purpose/inference/main idea formal speech	more paragraphs/presentation less visual support purpose/inference/main idea more natural speech more formal speech
	Instruction	L1.1 CAN recognize letters and most simple words/sentences that they've learned.	L2.1 CAN understand face-to-face instructions in classes or games (e.g. "Say "Stop").	L3.1 CAN understand simple instructions in daily life (e.g. clean rooms, open the door)	L4.1 CAN understand simple instructions in situations (e.g. navigational directions).	L5.1 CAN understand instructions with more contexts. (e.g. handcraft making/regulation)	L6.1 CAN understand instructions from notice, broadcast or simple product introduction.	L7.1 CAN follow multi-step instructions and procedures for simple activities (e.g. handicrafts, recipe, sports).
	Description/Narration	L1.2 CAN understand basic greetings and courtesies.	L2.2 CAN follow oral descriptions or simple statements of common objects and persons and identify information (e.g. family member, age, name, colors, numbers, size, location).	L3.2 CAN follow oral descriptions or simple statements of objects and persons and identify specific information (e.g. look, hobby, action, price, days of the week, numbers). L3.3 CAN understand main ideas of cartoons or picture books and match the words with pictures.	L4.2 CAN follow simple oral descriptions of people, places, objects, schedules and obtain related information (e.g. nationality, mood, dates, directions, weather, phone numbers). L4.3 CAN understand main idea and specific information of daily life.	L5.2 CAN follow oral descriptions of people, places, objects and events; grasp main idea and obtain related information (e.g. career, hometown, profession). L5.3 CAN understand simple stories and narratives about daily life (e.g. recent experience/plan); infer sequence and causal relationships among events.	L6.2 CAN follow oral descriptions of daily life, countries, regions, products; grasp main idea and obtain specific information (e.g. health, diet). L6.3 CAN understand stories or accounts of personal experience; infer logical relationships among characters and events.	L7.2 CAN understand main and specific information of monologues, announcement, radio broadcast, formal conversations, and stories (e.g. safety knowledge, biographies, regions, scenic spots). L7.3 CAN understand narratives of events or people; infer logical relationships among characters and events with more natural speed.
	Argumentation	No descriptors available				L5.4 CAN understand the main idea of short speeches or talks that is carefully articulated and paused for young learners to assimilate meaning.	L6.4 CAN obtain key information from speeches or talks articulated clearly and understand speaker's basic intentions.	L7.4 CAN obtain key information and main ideas from formal speeches or talks and make inference about speakers' intentions.
	Conversation 中考/TOEFL P, TOEIC, 四六级 Cambridge Test	No descriptors available	L2.3 CAN understand and respond to high-frequency YES/NO questions (e.g. Are you a student? Yes, I am.)	L3.4 CAN understand and respond to simple questions and request in daily conversation. (e.g. what do you like to drink? Juice, please.)	L4.4 CAN understand and respond to statements in daily conversation. (e.g. I don't like her boyfriend. Me, either.)	L5.5 CAN understand and respond to conversations and statements in daily conversation; and understand the speaker's purpose.	L6.5 CAN understand and respond to conversations and statements about work and study; and understand the speaker's purpose.	L7.5 CAN understand formal conversations and identify topic progression and transition.
Speaking 28	Overall	Phonic Awareness Candidates will hardly be able to speak or communicate; can speak 26 letters; spell words and use the most basic terms for greetings with the help of pictures.	Simple conversation Candidates will be able to express simple phrases and sentences for common daily themes with the help of pictures and scenes.	Extended communication Candidates will be able to use slightly complete phrases and sentences to describe people and objects, and express his/her likes and dislikes with the help of pictures and scenes.	Extended communication Candidates will be able to use simple sentences to instruct, describe, communicate, narrate and express his/her agreements or disagreements in different situations.	Free Speech Candidates will be able to use more various sentences to describe, narrate, instruct and use examples to support his/her viewpoints for daily life themes.	Free Speech Candidates will be able to vividly use a variety of rich sentences to describe, narrate, instruct and use examples to support his/her viewpoints for daily life themes.	
	Key Words	letter/sound simple words	words/phrases/limited sentence visual support	phrases/simple sentence visual support	simple sentences limited words visual support	Compound/complex sentences stories/events with some details less visual support	Compound/complex sentences almost complete stories/events less visual support	
	Instruction	S1.1 CAN recite letters of the alphabet and spell basic words that have learned. S1.2 CAN orally provide basic personal information (e.g. name) and respond to basic questions or greetings (e.g. hello, hi).	No descriptors available	No descriptors available	S4.1 CAN provide some oral instructions, such as "Open the door", "Stand up", "Pass me...". S4.2 CAN describe familiar persons, time, objects and personal feelings in simple terms (e.g. clothes, occupation, character, weight, shape, weather). S4.3 CAN, with preparation, tell simple and limited short stories based on prompts and cues.	S5.1 CAN provide information about routes and directions in familiar communication situations. e.g. Go along this road. S5.2 CAN describe, after preparation, people's dreams, and familiar places in simple terms. S5.3 CAN, with preparation, tell simple short stories and personal experiences based on cues. S5.4 CAN use simple language to express his/her own opinions, based on the provided verbal cues. e.g. I think it's good to eat apples.	S6.1 CAN provide simple instructions in daily communications. S6.2 CAN describe countries and regions experiences prompted by a picture or text. e.g. I went to HZ this summer. S6.3 CAN briefly describe an almost complete and coherent story or a past event based on cues, although some details are left out. S6.4 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on daily life. e.g. I think going sport is good because it makes me happy. S6.5 CAN ask varied questions about BW for daily needs based on prompts	S7.1 CAN provide simple instructions in teamwork. S7.2 CAN describe festivals and activities in different countries and places. e.g. The best month at school is ... S7.3 CAN retell complete and coherent stories in sequence about self/others with details. S7.4 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on social events/people. e.g. I think Steve Jobs is great because he is creative. S7.5 CAN use simple language to exchange information on familiar topics.
	Description/Narration	S2.1 CAN use simple statement while given questions or pictures (e.g. It's a box. This is a cat). S2.2 CAN give very basic descriptions of people (age, address) and objects (how many, colour, size or location)	S2.1 CAN use simple statement while given questions or pictures (e.g. It's a box. This is a cat). S2.2 CAN give very basic descriptions of people (age, address) and objects (how many, colour, size or location)	S3.1 CAN describe time, objects, animals (actions) and people (appearance, doing) with simple phrases and sentences.	S4.2 CAN describe familiar persons, time, objects and personal feelings in simple terms (e.g. clothes, occupation, character, weight, shape, weather). S4.3 CAN, with preparation, tell simple and limited short stories based on prompts and cues.	S5.2 CAN describe, after preparation, people's dreams, and familiar places in simple terms. S5.3 CAN, with preparation, tell simple short stories and personal experiences based on cues. S5.4 CAN use simple language to express his/her own opinions, based on the provided verbal cues. e.g. I think it's good to eat apples.	S6.2 CAN describe countries and regions experiences prompted by a picture or text. e.g. I went to HZ this summer. S6.3 CAN briefly describe an almost complete and coherent story or a past event based on cues, although some details are left out. S6.4 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on daily life. e.g. I think going sport is good because it makes me happy.	S7.2 CAN describe festivals and activities in different countries and places. e.g. The best month at school is ... S7.3 CAN retell complete and coherent stories in sequence about self/others with details. S7.4 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on social events/people. e.g. I think Steve Jobs is great because he is creative.
	Argumentation	No descriptors available	No descriptors available	S3.2 CAN use simple short sentences to express his/her likes and dislikes based on cues (e.g. I like apples).	S4.4 CAN express agreement or disagreement with someone using short, simple phrases. e.g. No, it's not a cat. S4.5 CAN ask someone how they feel and ask simple questions about clothes, job, habits and preference.	S5.4 CAN use simple language to express his/her own opinions, based on the provided verbal cues. e.g. I think it's good to eat apples. S5.5 CAN ask for directions and negotiate about time/place/price.	S6.4 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on daily life. e.g. I think going sport is good because it makes me happy. S6.5 CAN ask varied questions about BW for daily needs based on prompts	S7.4 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on social events/people. e.g. I think Steve Jobs is great because he is creative.
	Conversation 中考/TOEFL P, TOEIC, 四六级 Cambridge Test	No descriptors available	S2.3 CAN give greetings based on situations (e.g. Good morning)	S3.3 CAN ask and answer simple questions about people, number/price, age, size.	S4.5 CAN ask someone how they feel and ask simple questions about clothes, job, habits and preference.	S5.5 CAN ask for directions and negotiate about time/place/price.	S6.5 CAN ask varied questions about BW for daily needs based on prompts	S7.5 CAN use simple language to exchange information on familiar topics.
Reading 27	Overall	Phonics	Reading for communication	Reading for information	Reading for information	Reading for knowledge	Reading for knowledge	
	Material Types		CAN extract basic information from simple language.	CAN extract main ideas and some details from a simple story.	CAN extract main ideas and specific details, and analyze author's purpose of writing from a short passage.	CAN extract main ideas, analyze relationships between characters and infer solutions in stories or short passages.	CAN extract outline and detailed information, analyze text features and infer solutions in stories or short passages.	CAN extract outline and essential information, infer unknown words and intent of writing, and analyze author's point of view and characters' personalities in stories or events.
	Materials		words Narration	Description Narration	Description Narration Exposition	Description Narration Exposition	Description Narration Exposition Argumentation	Description Narration Exposition Argumentation
	Text Length		words phrases short sentences(simple)	phrases short sentences(simple)	phrases sentences(some complex sentences)	sentences(some complex sentences) small paragraphs	sentences/complex sentences) paragraphs	sentences/complex sentences) paragraphs
	蓝思阅读能力对照表							
	Lexile		BR120L - 295L	170L - 545L	416L - 706L	635L - 950L	770L - 1080L	896L - 1169L
RAZ	AA-B	B-E	E-K	L-N	M-U	V-Z	11-17	
CCSS	PK-K	1	2	3	4	5	6	
AC Lexile			AC2 - AC3	AC4 - AC5	AC6 - AC7			
Writing 19	Overall	Write 26 letters.	Basic Writing Spell words with cues.	Extended Writing Spell words with limited cues or in context. Complete short sentences	Creative Writing Can write isolated phrases and sentences in a given sentence or context.	Creative Writing Can write short sentences with connectors in a given context.	Creative Writing Can write more sentences with connectors in a given context.	
	Instruction	No descriptors available	No descriptors available	No descriptors available	W4.1 CAN write simple cues/ instructions	W5.1 CAN write simple activity instructions given by teachers.	W6.1 CAN write simple directions (e.g. How to go to the library).	
	Description/Narration		W2.1 CAN write simple words about basic personal information (name, age, place, favorite food/animals) and objects information (color/number)	W3.1 CAN complete a short sentence to describe or narrate daily activities, figures, habit, hobby, transportation.	W4.2 CAN write phrases about salient feature of familiar people, objects, feature of weather or climate. (e.g. mood, clothes, occupation, nationality)	W5.2 CAN Write 1-2 short sentences to describe people's dreams and experiences.	W6.2 CAN write sentences with connectors to clearly tell/describe events/stories/people's experiences (e.g. from a tree).	W7.2 CAN write a short complete paragraph with connectors to clearly tell an event/a story (first, second, third, because, so, then, it, however)
	Argumentation	No descriptors available	No descriptors available	W3.2 CAN write about simple greetings for a particular day (e.g. Children's Day; Mother's Day)	W4.3 CAN use phrases to complete short stories/schedules with cues.	W5.3 CAN use short sentences to complete short stories/event with cues.	W6.3 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on daily life.	W7.3 CAN cite examples from everyday occurrences as evidence to support his/her viewpoint on social events/people.
				W3.3 CAN write likes/dislikes	W4.4 CAN write simple reasons to express likes or dislikes.	W5.4 CAN express agreement or disagreement using short, simple reasons.		