

Using the PIAAC Literacy Framework to Guide Instruction: An Introduction for Adult Educators

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Suggested Citation: Trawick, A.R. (2017). *Using the PIAAC Literacy Framework to Guide Instruction: An Introduction for Adult Educators*. Retrieved [insert date], from piaacgateway.com/research-to-practice-guides. Washington, DC.

This project has been funded by the American Institutes for Research through a contract with the National Center for Education Statistics (NCES) of the U.S. Department of Education. This report is based on PIAAC data released in October 2013. The views expressed in this paper do not necessarily reflect the views or policies of the American Institutes for Research, National Center for Education Statistics, or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply their endorsement the U.S. Government.

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to Guide Instruction:
An Introduction for Adult Educators**

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Acknowledgements

Thank you to the teachers, professional developers, AIR staff, and PIAAC researchers who offered their thorough and thoughtful feedback over the course of this project. I am especially grateful to Dr. Sondra Stein for her ongoing inspiration and insight.

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Table of Contents

SECTION I: INTRODUCTION.....	1
An Invitation.....	2
SECTION II: THE BUILDING BLOCKS OF THE PIAAC LITERACY FRAMEWORK.....	4
Definition for <i>Literacy</i>	5
Basic Task Elements: Contexts, Content, and Cognitive Strategies.....	10
Contexts.....	10
Content.....	12
Cognitive Strategies.....	14
Factors Affecting Task Difficulty.....	16
SECTION III: TEACHING AND LEARNING WITH PIAAC LITERACY TOOLS.....	20
Phase 1: Contextualize the Skill Instruction, Using the Basic PIAAC Framework Elements.....	21
Phase 2: Incorporate the Factors Affecting Task Difficulty.....	24
Phase 3: Embed and Sequence Instruction in the Most Relevant Skills.....	26
Putting It All Together.....	29
SECTION IV: CONCLUSION.....	30
REFERENCES.....	31
APPENDICES	
Appendix A: Level Descriptions and Sample Tasks for PIAAC Literacy Levels.....	33
Appendix B: Rhetorical Stances.....	35
Appendix C: Layout of Non-Continuous Text.....	36
Appendix D: Digital Text Considerations.....	37
Appendix E: Reading & Writing Goal Sheet.....	38
Appendix F: Finding (Free) Texts for Adult Learners.....	39
Appendix G: Contextualized Reading Instruction AT-A-GLANCE.....	40
EXHIBITS	
<i>EXHIBIT 1: Overview of the Study of Adult Skills (PIAAC)</i>	2
<i>EXHIBIT 2: Defining Literacy</i>	5
<i>EXHIBIT 3: Purposes for Literacy and Types of Text Interaction</i>	6
<i>EXHIBIT 4: Guiding Questions for Reflecting on the PIAAC Definition for Literacy</i>	9
<i>EXHIBIT 5: PIAAC Framework Elements</i>	10
<i>EXHIBIT 6: Planning with Context in Mind (Spotlight on Marco)</i>	11
<i>EXHIBIT 7: Features of Authentic Text</i>	12
<i>EXHIBIT 8: Planning with Content in Mind (Spotlight on Marco)</i>	13
<i>EXHIBIT 9: Planning with Cognitive Strategies in Mind (Spotlight on Marco)</i>	15
<i>EXHIBIT 10: Guiding Questions for Planning for Task Difficulty</i>	18
<i>EXHIBIT 11: Example of Using the Factors of Affecting Task Difficulty (Marco)</i>	19
<i>EXHIBIT 12: Model for Contextualized Reading Instruction</i>	21

<i>EXHIBIT 13: Example of Contextualized Skill Instruction (Sonia)</i>	22
<i>EXHIBIT 14: Sampling of Contextualized Units</i>	23
<i>EXHIBIT 15: Guiding Questions for Designing Contextualized Units</i>	24
<i>EXHIBIT 16: Example of Using the Factors Affecting Task Difficulty (Sonia)</i>	25
<i>EXHIBIT 17: Scaffolded Skill Instruction in Context, #1 (Marco)</i>	26
<i>EXHIBIT 18: Scaffolded Skill Instruction in Context, #2 (Sonia)</i>	28

SECTION I: INTRODUCTION

Adults in an information-rich, technology-based society like ours need to read in order to participate fully in everyday life. Staying abreast of current events, managing health issues, communicating at work, researching personal interests—all are examples of tasks that more often than not require us to engage with written texts, usually with those that are digital in nature. These texts come in a plethora of formats, frequently convey contradictory information, and sometimes reflect unexpected agendas. The ability to make sense of all these aspects of text in the pursuit of our own purposes for reading requires us to be skilled readers. So how skilled are adult readers, in general, in the United States?

The Organization for Economic Co-operation and Development (OECD) has invested in international surveys throughout the years, with each assessment including rather detailed information about the skill levels of the adults in the United States. The results of the literacy portion of the Survey of Adult Skills, the latest assessment, give one pause. In general, the average score for adults in the United States was not significantly different from the international average in reading literacy (Rampey, Finnegan, Goodman, Mohadjer, Krenzke, Hogan, & Provasnik, 2016). However, the overall average conceals results of great concern:

- A larger percentage of U.S. adults scored in the very lowest levels for reading literacy, compared to the international cohort;
- U.S. adults with less than a high school diploma scored lower than their peers internationally;
- While only 9% of Whites in the U.S. scored at the lowest levels of proficiency, 33% of Blacks and 40% of Hispanics performed at these levels;
- Roughly 75% of unemployed adults (age 16-65) in the U.S. have less than a high school credential as their highest education level, and a third of these perform at the lowest levels in reading literacy; and
- Adults with the lowest literacy scores were more likely to report a poor health status and more limited civic engagement (Rampey et al., 2016).

This news of how the skills of adults in the United States compare with their peers across the globe comes at a time when the nation is challenged by international economic competition and by a variety of social and political stressors, both at home and on the world stage (Kirsch, Braun, Yamamoto, & Sum, 2007). Individually, U.S. adults face a dynamic and complicated labor market, including ever-changing technology and new occupational structures that are biased towards high-skilled and highly-educated workers. Furthermore, in their homes, at work, and in their communities, adults confront a wealth of diverse and often conflicting sources of information, delivered through platforms unimaginable twenty years ago. The data from the latest international assessment confirm that it is imperative that adults develop the requisite skills to navigate these realities of the 21st century in order for them to participate fully in society and for their society to participate successfully in the international arena. The OECD (2013b) argues, “Without the right skills, people are kept at the margins of society, technological progress does not translate into economic growth, and enterprises and countries can’t compete in today’s globally connected and increasingly complex world” (p. 26). Skills may not be all that matter, but they do matter. A great deal.

An Invitation

The Survey of Adult Skills (a.k.a., “PIAAC”; see EXHIBIT 1) does more than provide a measure of how we are doing. It also provides tools that educators may find useful in helping adults build those skills. These tools work well with many adult education content standards that are being used across the country. The *College and Career-Readiness Standards for Adult Education* (CCRS; Pimentel, 2013), along with comparable state versions, have been adopted in efforts to prepare adult learners in the United States for the skill demands of the 21st century. The standards articulate the English language arts/literacy and mathematics skills required to succeed in three broad arenas: 1) entry-level positions of promising careers, 2) introductory academic college courses and workforce training programs to prepare for these careers, and 3) activities required of active citizens in a demanding democracy. For the first time, efforts are aligning K-12, postsecondary education, and adult education in a vision for what it means to be “college and career ready.”

In 2014, Congress passed the Workforce Innovation and Opportunity Act (WIOA; 2014), the principal legislation directing workforce and adult education activity nationally. Together, WIOA and the CCRS focus the field of adult education on developing skills with an eye towards college, careers, and citizenship. This emphasis has given rise to the need for approaches to teaching and learning that can realize this vision.

While the recent results of PIAAC (Rampey et al., 2016; OECD, 2013b) underscore the importance of this national activity, the work that went into developing the survey provides material that, with adaptation, has the potential to enhance the delivery of adult education itself. In particular, the conceptual framework that guided the literacy assessment invites a way of thinking about adult reading instruction that is based on theory and research related to how adults use reading in their everyday 21st-century lives. Two key notions infused into the PIAAC

EXHIBIT 1: Overview of PIAAC

- The Survey of Adult Skills, formally known as the Programme for the International Assessment of Adult Competencies, or PIAAC, is a cyclical, international assessment of the skill levels of adults in advanced, information-rich economies. Coordinated by the Organization for Economic Co-operation and Development (OECD), the PIAAC assessments have been conducted in two rounds internationally thus far, one in 2012 and the other in 2014. The “key information-processing skills” of *literacy* (reading only), *numeracy*, and *problem solving in technology-rich environments* have each been assessed through separate surveys. These skills were selected because they were deemed “essential for full participation in the knowledge-based economies and societies of the 21st century” and:

 - “necessary for fully integrating and participating in the labour market, education and training, and social and civic life;
 - highly transferable, in that they are relevant to many social contexts and work situations; and
 - ‘learnable’ and, therefore, subject to the influence of policy” (OECD, 2013a, p. 18).

In addition to assessing the three key information-processing skills, the battery of assessments includes a skills use module, which collects information from each participant on communication, interpersonal, problem-solving, and learning skills used in the workplace. Respondents also complete an extensive Background Questionnaire that documents demographic data and information on education and work history to inform policy decisions based on study results. Adults with very low-level literacy skills and those who choose to take the paper-pencil version of the test are also administered a Reading Components assessment that assesses reading vocabulary, sentence processing, and basic passage comprehension. Taken together, these features make the latest PIAAC study the most comprehensive assessment of adult skills undertaken to date. For more information on PIAAC visit www.piaacgateway.com.

literacy framework should feel especially compelling to adult education practitioners: a *use-oriented conception of competency* and a *view of proficiency as a continuum*.

- **Use-oriented conception of competency:** Central to the PIAAC work is an understanding that each of the complex skills assessed is best conceptualized in terms of how adults actually use the skill (in this case, *reading*) as they go about the various tasks that comprise their adult lives. Individuals draw from and put to use cognitive strategies and component sub-skills, such as alphabets and vocabulary, as they tackle reading tasks throughout their day, but ultimately it's the accomplishment of the task itself that matters most. What PIAAC was principally interested in assessing, regarding reading, was how well adults can apply key reading skills to accomplish these adult reading tasks—using adult-oriented materials, in authentic contexts, for real-life purposes. The term “literacy-in-use” captures this intent (PIAAC Literacy Expert Group, 2009, p. 6). The reasoning and the conceptual tools that made such rich assessment work possible can now do double-duty in helping to prepare adults for these kinds of reading tasks.
- **View of proficiency as a continuum:** The second adult-education-friendly notion is the understanding that literacy, like other complex domains of expertise, is not an all-or-nothing skill. An adult cannot be deemed “literate” or “not literate.” Rather, the “skill” of literacy is composed of dynamically interacting facets and is impacted by myriad factors that ultimately place individual performance along a continuum. Instead of being deemed “proficient” or “not proficient,” then, individuals taking the PIAAC survey were scored and placed on a scale based on the complexity of literacy tasks they were able to perform with a probability of at least 67%. See APPENDIX A. Thinking of reading performance in this way can be helpful for practitioners as well. Understanding the factors that make authentic reading tasks more and less difficult enables instructors, curriculum designers, and assessors to 1) differentiate instruction to address the multi-level nature of adult literacy settings and 2) design instructional activities that enable students to progress along a continuum.

Preparing adult learners for the ultimate performance of participating fully in the complex social, economic, and political life of the 21st century is not easy. For guidance, the National Research Council (NRC, 2012) notes that adult literacy instruction “is most likely to lead to durable, transferable learning if it incorporates real-world activities, tasks, and tools” (p. 6). The PIAAC conceptual framework for the literacy assessment is based in theory and research about the contexts, texts, and cognitive strategies adults at different levels integrate to accomplish such “real-world” reading activities; thus, it offers the field of adult education an opportunity to think in creative and sophisticated ways about adult literacy instruction. **The purpose of this introductory guide is to describe how adult literacy practitioners—such as teachers, lead instructors, and professional developers—might enhance their efforts with adult developing readers by incorporating relevant tools from PIAAC’s literacy framework to support the goals of WIOA, the CCRS, and adult learners themselves.**

This guide is divided into four sections. **Section II** introduces the building blocks of the PIAAC literacy framework. We start by exploring the definition for literacy that guided the literacy assessment work and move to examining elements of the framework that are key to

instructional planning, the focus of the guide. As we go, we follow a teacher, Marco, as he considers each element in planning instruction for a class of intermediate students. In **Section III**, we delve more deeply into instructional planning, this time with Sonia, a teacher for a class of adult beginning readers. We follow Sonia as she uses a three-step process for an approach to contextualized teaching and learning that uses the PIAAC tools introduced in Section II. **Section IV** concludes the guide. The Appendices provide further explanation of certain PIAAC elements and aids for practitioner use. Throughout the paper, sections entitled “PD Reflection/Discussion” and “Take-Away” offer opportunities to pause and reflect—either individually or with colleagues—on sections or sub-sections.



Take-Away

What is the value-added of using the PIAAC work to build curriculum? As you read through the guide, you will learn more about the following benefits of the PIAAC literacy framework:

- It is based on theory and research on literacy-in-use.
- It describes real-world reading activity in ways that can inform curriculum development/instructional planning and enhance the transfer of skill learning to domains outside the classroom.
- It describes key factors that impact the difficulty of reading tasks, supporting efforts to differentiate instruction in multi-level classrooms and move students along a continuum of proficiency.
- It supports the goals of WIOA, College and Career Readiness Standards, and adult learners.

SECTION II: THE BUILDING BLOCKS OF THE PIAAC LITERACY FRAMEWORK

What does it mean to be literate in the 21st century? PIAAC was intended to provide information on whether adults were equipped to carry out critical literacy tasks in information-rich, technology-based societies. An expert group was convened to develop a conceptual framework to ensure that the literacy assessment focused on this use-oriented, or applied, definition of literacy.¹ They elaborated in some depth what adult literacy really means in this current age. By drawing from this conceptual framework, we as adult educators can better craft curriculum and instruction that will prepare adult learners for the unique challenges of this era.

In this section we examine three aspects of the framework:

- **The definition for *literacy*** used by the PIAAC literacy expert group to guide their work, giving consideration to what it means to us in *our* work;
- **The basic elements used to frame a literacy task** (e.g., **Contexts, Content, and Cognitive Strategies**), following a teacher, Marco, as he uses these elements to plan instruction; and

¹ The document describing the PIAAC conceptual framework for literacy is referred to interchangeably by its shortened name, the “literacy framework,” in this guide.

- **Factors affecting task difficulty**, exploring how these can aid in planning for multi-level classrooms and in helping students progress along the proficiency continuum.

In the next section, we'll examine in more depth an approach for strategically integrating these in curriculum design, but for now we want to get familiar with the possibilities each offers individually.

Definition for *Literacy*

Let's look first at how the PIAAC literacy expert group defined *literacy* because that understanding sets the stage for everything else we will talk about. The specific words provide valuable insight into what the international community valued about literacy, but it also makes more concrete what can otherwise be a rather abstract concept. See EXHIBIT 2.

EXHIBIT 2: Defining Literacy

PIAAC
<p><i>Literacy is defined as the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential.</i></p> <p><i>Literacy encompasses a range of skills from the decoding of written words and sentences to the comprehension, interpretation, and evaluation of complex texts. It does not, however, involve the production of text (writing).</i></p> <p><i>Information on the skills of adults with low levels of proficiency is provided by an assessment of reading components that covers text vocabulary, sentence comprehension and passage fluency.</i></p> <p>(OECD, 2013b, p. 59)</p>
<p>*PIAAC delineates <i>literacy</i> from <i>numeracy</i> and <i>problem solving in technology-rich environments</i> and defines each with its own framework.</p>

It's important to note upfront that the PIAAC framework uses *literacy* to refer to *reading*-related activity, as opposed to activity related to spoken language or the act of producing written texts. The survey focused only on reading because of the current limitations of assessing across language and culture on an international scale (OECD, 2013b; PIAAC Literacy Expert Group, 2009).

You might also note that skills are listed in the second sentence of the definition and range from decoding words to evaluating complex texts. It is sometimes tempting to think of literacy education as learning just these skills. However, the PIAAC framework states that literacy encompasses these skills; it is not defined as these skills².

The first paragraph itself gives us the core of PIAAC's *use-oriented* definition of literacy. As you see, the definition of literacy is oriented towards three major **purposes for literacy**:

1) *participate in society*, 2) *achieve one's goals*, and 3) *develop one's knowledge and potential*.

² The literacy expert group addressed the role these skills play through a Reading Components assessment. Adults who were unable to successfully complete a set of four core literacy tasks at the start of the assessment were not required to complete the full literacy survey. Instead, they were directed to a Reading Components assessment that focused on three key reading components: reading vocabulary, sentence processing, and passage comprehension.

In the literacy framework document, the expert group discusses how it arrived at these purposes, explaining that the definition of literacy used the word “function” originally. The group ultimately landed on “participate” in order “to focus on a more active role for the individual” (p. 9). Here’s how the expert group explains their intent:

“Adults use text as a way to engage with their social surroundings, to learn about and to actively contribute to life in their community, close to home and more broadly. And for many adults, literacy is essential to their participation in the labor force. In this, we recognise the social aspect of literacy, seeing it as part of the interactions between and among individuals.” (PIAAC Literacy Expert Group, 2009, p. 9)

The new definition, then, emphasizes the social aspect of literacy, how adults use literacy collaboratively to affect the people and events around them. This is an important evolution.

The definition also underscores the role of text in the pursuit of personal goals and developing one’s potential. Personal goals might range from managing a shopping trip to managing a career, from choosing a menu item to deciding upon a retirement plan, from negotiating the bureaucracy of the local school system on behalf of a child to navigating the financial aid waters of the local community college on behalf of oneself. “Literacy is increasingly complicit” (PIAAC Literacy Expert Group, 2009, p. 9) in all of these goal pursuits, especially in an information-rich society like ours. Similarly and perhaps unsurprisingly, developing one’s knowledge and potential through lifelong learning--whether that learning is formal and classroom-based, or informal and self-directed--often requires interacting with text.

A use-oriented view of adult literacy, then, must take into consideration these three purposes for literacy. The four verbs we see in the PIAAC definition--*understand*, *evaluate*, *use*, *engage*--describe the **types of interaction with text** needed to achieve these purposes (see EXHIBIT 3).

EXHIBIT 3: Purposes for Literacy and Types of Text Interaction

<p>Types of Interaction with Text</p> <p>Readers</p> <ul style="list-style-type: none"> ● understand ● evaluate ● use ● engage with written text 	to	<p>Purposes for Literacy</p> <ul style="list-style-type: none"> ● participate in society ● achieve one’s goals ● develop one’s knowledge and potential.
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Understand and *evaluate* are familiar constructs in adult reading education and are well represented in states’ content standards. The other two types of interactions, however, may warrant a moment of deliberation. The expert group describes “using” a text as “applying the information and ideas in a text to an immediate task or goal or to reinforce or change beliefs” (PIAAC Literacy Expert Group, 2009, p. 13). Most questions in the PIAAC literacy assessment are framed within this *use* orientation, but how adults use written text is also addressed in the questions in the PIAAC Background Questionnaire that probe reading-related activities at

work and in everyday life. For instance, respondents are asked whether they read the following and to what extent:

- directions or instructions
- letters, memos, or e-mails
- articles in newspapers, magazines, or newsletters
- articles in professional journals, or scholarly publications
- books, fiction or nonfiction
- manuals or reference materials
- bills, invoices, bank statements, or other financial statements
- diagrams, maps or schematics

These *uses* of text speak to an immediate interaction with text; reading *engagement*, however, “refer[s] to the degree of importance of reading to an individual and to the extent that reading plays a role in their daily life” (PIAAC Literacy Expert Group, 2009, p. 20). In other words, *engagement* addresses the general attitudes and behaviors related to reading, especially the extent to which the individual views reading as a priority option for spending time and as a way of accomplishing goals. The expert group articulated five integrated aspects of engagement:

- a) *Amount and variety of reading*. The more one reads and the more different types of reading (purposes, types of text) one uses, the greater one is engaged with reading.
- b) *Interest in reading*. The more one seeks out reading as a means of obtaining information and for enjoyment, the greater one is engaged with reading.
- c) *Control*. The more one feels in control of what one reads and is able to direct one’s own reading, the greater the engagement.
- d) *Efficacy*. The more an individual feels able to read well, especially the confidence to read successfully new texts, the greater one is engaged with reading.
- e) *Social interaction*. The more one is interested in sharing reading experiences and seeks out others to talk about reading, the more one is engaged with reading. (PIAAC Literacy Expert Group, 2009, p. 20)

Fostering reading engagement is an increasingly vital piece of the overall mission of many adult education programs, especially in light of the fact that few students remain in those programs long enough to achieve the skill gains that could make a difference in their lives. Reder (2012) maintains that inviting students to develop their reading skills in the classroom through participation in reading practices that mirror those they find “in real life” (e.g., analyzing nutrition labels; finding and reading online information; reading, evaluating, and discussing opinions about current events) may inspire and enable students to engage in those practices when they depart the program. The hope is that, by continuing to interact with texts after their departure, students will reinforce and further develop their reading skills even without the benefit of ongoing instruction. That hope--and the multifaceted nature of the concept of engagement itself--suggest that these reading practices need to be taught and learned in adult education programs in ways that build self-efficacy, that promote ownership in the reading and learning processes, and that foster a sense of collaboration.

Taken as a whole, the purposes and types of text interaction described in PIAAC's definition for literacy offer the field a concrete reference point for reflecting on our vision for literacy (reading) instruction in our classroom and program settings. Do these purposes seem legitimate? Are these interactions with texts indeed the kinds we want to promote? If so, are we structuring learning opportunities in reading and wrap-around services for adult learners in ways that transfer to their lives? Practitioners in an adult education program might use this definition to revisit the program's mission/vision statement, curriculum, and services to ascertain if the scope of literacy programming they offer supports the purposes for literacy and types of text interaction described in the literacy framework. Answering questions like those posed in EXHIBIT 4 can aid in this kind of reflection, a first step to building the collaboration and system support required for the integrated instructional approaches advocated in this guide.

Before moving forward, it is important to reflect upon the extent to which your orientation to reading instruction aligns with the PIAAC definition for literacy. The nuts and bolts discussed next in the guide are based in this overall definition, so this reflection is key. As you consider the approaches in the following pages, keep the definition of literacy—and your own program goals—in mind.

PD Reflection/Discussion

How does your program's articulated and enacted definition of literacy (as indicated through its mission statement, standards, curriculum, teaching, and wrap-around services) compare to the PIAAC definition? What kinds of changes--either for you personally or for the program-- would be necessary to bring literacy instruction into greater alignment with this definition?

EXHIBIT 4: Guiding Questions for Reflecting on the PIAAC Definition for Literacy

	Description	Questions to Ask
PURPOSES FOR LITERACY		
Participate in society	Refers to the active ways in which adults use text to interact with each other in order to contribute to their homes, communities, and workplaces.	1. For each purpose , answer these questions: <ul style="list-style-type: none"> • In what ways does your program mission statement capture this purpose? • In what ways does your CCRS document further this purpose? (In addition to the standards themselves, look at the <i>Introduction</i>, examples, guidelines, etc.) • Where/how/to what degree do your program’s curricula, materials, and/or approaches already foster this purpose? Find specific examples. • (Teachers) Look through recent lesson plans. In what ways are you already teaching to this purpose? 2. What are the implications moving forward?
Achieve one’s goals	Refers to how adults use text to address their immediate and long-term needs/goals. These goals may range from finding housing to progressing in a career to participating more fully in the community.	
Develop knowledge and potential	Refers to how adults use text for self-directed, informal, or formal learning to improve some aspect of their life.	
TYPES OF INTERACTION WITH TEXT		
To understand	Addresses such things as understanding vocabulary, identifying the main idea, grasping the author’s purpose and how ideas are organized, including knowing how these are affected by social function. Many <i>understanding</i> tasks can be quite complex, requiring high-level inferencing and analysis.	1. For each type of interaction , answer these questions: <ul style="list-style-type: none"> • How is it captured in your program’s mission statement? How might the mission statement be revised to better capture this interaction? • How do the Reading CCRS prompt this interaction? • Where/how/to what degree does this interaction already show up in your program’s curricula, materials, and/or approaches? • (Teachers) Review recent lesson plans. In what ways are you already teaching for this type of interaction? 2. What are the implications moving forward?
To evaluate	Addresses whether a particular text is relevant for the task—and reliable as a source. It can also involve making judgments about the accuracy of a particular statement or the quality of an overall text. The ability to evaluate text has emerged as an important skill in the new digital age, where adults are inundated with information from sometimes questionable sources.	
To use	Addresses ability to apply information in a text to a specific goal. Adults don’t read menus to define words or answer questions. They read menus to order food. They read directions to get something done. They read websites to find information that they can act on.	
To engage	Addresses the degree to which adults seek out reading to obtain information or for enjoyment; the amount and range of reading they do; the confidence they have in their own reading and their ability to direct their own reading; and how likely they are to share their reading with others.	

Basic Task Elements: Contexts, Content, and Cognitive Strategies

After clearly defining *literacy*, the literacy expert group next had to decide how to assess it. The PIAAC expert groups from across all three assessments developed a basic framework, one that was customized and elaborated upon to guide assessment in each specific skill domain. These elements describe essential aspects of authentic adult tasks in information-rich societies like our own, aspects that can be used to guide teaching and learning for adult students. Let’s discuss each element of the framework in turn—in conjunction with additional pieces included as part of the customization process for the literacy assessment (see EXHIBIT 5)--to see how it might inform reading instruction in broad terms.

EXHIBIT 5: PIAAC Framework Elements

Framework Element	General Definition <i>(applied across the assessments for literacy, numeracy, and problem-solving in technology-rich environments)</i>	Applied to Literacy
Contexts	The different situations in which adults have to read, display numerate behavior, and solve problems	<ul style="list-style-type: none"> • Work-related • Personal • Society and community • Education and training
Content	The texts, artifacts, tools, knowledge, representations and cognitive challenges that constitute the corpus to which adults must respond or use when they read, act in a numerate way or solve problems in technology-rich environments	Different types of text. Texts are characterized by their medium (print-based or digital) and by their format : <ul style="list-style-type: none"> ○ Continuous or prose texts ○ Non-continuous or document texts ○ Mixed texts ○ Multiple texts
Cognitive Strategies	The processes that adults must bring into play to respond to or use given content in an appropriate manner	<ul style="list-style-type: none"> • Access and identify • Integrate and interpret (relating parts of text to one another) • Evaluate and reflect

*Adapted from EXHIBIT 2.1 Summary of Assessment Domains in the Survey of Adult Skills (PIAAC) (OECD, 2013b, p. 59).

Contexts. The first element of the basic PIAAC framework to note is *Contexts*, defined as “the different situations in which adults have to read, display numerate behavior, and solve problems” (OECD, 2013b, p. 59). For literacy, “the circumstances and context in which reading takes place may influence the motivation to read and the manner in which texts are interpreted” (OECD, 2012, p. 22). That means that the PIAAC expert group needed to identify those key contexts in which adults operate and then to specify the texts and tasks appropriate within those contexts. The intent of the international assessment was to ascertain how adults are able to use literacy (and the other broad information-processing skills) in their lives, so pinpointing the contexts in which these skills are actually used is crucial for both the purposes of the assessment—and for adult educators. Four broad contexts were identified for literacy use for adults:

- **Work and occupation** (e.g., job search, wages, salaries, benefits, being on the job)
- **Personal uses**
 - Home and family (e.g., interpersonal relationships, personal finance, housing, and insurance)

- Health and safety (e.g., drugs and alcohol, disease prevention and treatment, safety and accident prevention, first aid, emergencies, and staying healthy)
- Consumer economics (e.g., credit and banking, savings, advertising, making purchases, and maintaining personal possessions)
- Leisure and recreation (e.g., travel, recreational activities, and restaurants, as well as material read for leisure and recreation itself)
- **Society and community** (e.g., public services, government, community groups and activities, and current events)
- **Education and training** (e.g., opportunities for further learning)

How might we as practitioners apply this information? Let's look at how one teacher considered the identified PIAAC literacy contexts in his work (EXHIBIT 6).

EXHIBIT 6: Planning with Context in Mind

Spotlight on Marco: Context

Marco teaches in a large urban community-based organization and has a class of 15 intermediate students (GLE 4-8.9). He is responsible for teaching to the state's College and Career Readiness (CCR) English Language Art (ELA) Standards and has been trained in STAR, a national approach to teaching adult intermediate readers. According to his program's mission, he is also supposed to simultaneously build students' content knowledge and support them in meeting their college, work, family, and life goals. Many students plan to move into the next class to prepare for the GED. Marco's class meets 5 hours a week for ELA instruction.

Marco is ready to plan the context focus for his next unit. One of the students in the class has just been diagnosed with diabetes, and there has been a good deal of informal talk about what diabetes is, what causes it, and how she's going to treat it. Students have also been talking about gun violence. Marco needs to decide where he wants to focus the skill instruction for the unit. He looks over his list of PIAAC topics and realizes that the class has recently completed units in career exploration (work), what it takes to go to college (education and training), elections (society and community), and current events (society and community). He reads through the PIAAC options and sees the "health and safety" category under the "personal" section and realizes 1) addressing student health is a major part of the program's mission and 2) he hasn't covered science in whole class instruction yet. He knows he needs to be building students' background knowledge both for the GED and for life. The topic "disease prevention and treatment" is listed in the PIAAC content topics and is directly related to his students' expressed interests. Marco decides to proceed from the student interest in diabetes to frame a unit around students' own "health concerns," permitting students to research disease prevention and treatment if that is where their concern lies. The unit will enable them to build their knowledge related to their bodies and health and to develop their informational reading skills along the way.

When learners are exposed to an array of contexts over time, they come to better understand the types of situations in which literacy is used and how literacy use varies across contexts. Like Marco, practitioners can refer to the actual PIAAC categories and sub-categories to remind themselves of topics of high-relevance, in general, to adults. To assure that students in the classroom see the immediate or future relevance of selected contexts, teachers and curriculum developers would ideally draw a specific context directly from the students whenever possible. However, the PIAAC categories can serve as concrete reminders of potent "hot topics" for adults from which to start.



Take-Away

What are the implications for practitioners and programs in terms of these four PIAAC *Contexts*?

- Adult learners should experience literacy tasks in a wide range of contexts across their time in a program. Keeping the four broad PIAAC contexts in mind—and tying classroom lessons directly to them—can ensure that practitioners and programs are providing a balanced set of learning experiences that prepare learners for literacy use in the key arenas of adult activity.
- Curriculum/instruction should not be restricted to these four contexts if other contexts arise among students that seem appropriate.

Content. The second element in the basic framework used by all the PIAAC assessments refers to “the texts, artefacts, tools, knowledge, representations and cognitive challenges that constitute the corpus to which adults must respond or use when they read, act in a numerate way or solve problems in technology-rich environments” (OECD, 2013b, p. 12). *Content* in the literacy assessment refers to the different types of texts adults read. PIAAC targets advanced, information-rich countries, so in identifying texts, the expert group was influenced by the role computer technologies play in accessing and presenting text. In these societies, the top-down, left-right orientation of traditional print has been augmented by the “nonlinear, recursive, and interactive nature” (PIAAC Literacy Expert Group, p. 5) of digital environments, complicating what it is that adults must know and manage to navigate text. The increased abundance of non-continuous texts—in graphs, charts, bullet points—was also a keen consideration. Thus, in PIAAC, texts are described by their **medium** (print-based or digital) and **format** (continuous text, non-continuous text, mixed within one text, or multiple).

Since adults in the 21st century need to negotiate a variety of types of texts outside academic settings, simply differentiating types of texts by medium and format (and sampling from among them) can provide opportunities for adult students to practice with a range of relevant text types. However, the expert group teased out further aspects of texts. EXHIBIT 7 shows additional demarcations that were made, and Appendices B-D in the Appendices provide elaborated descriptions of each.

EXHIBIT 7: Features of Authentic Texts

Rhetorical Stances (for Continuous and Non-Continuous Text)	Layout of Non-Continuous Texts	Digital Text Considerations
<ul style="list-style-type: none"> • <i>Description</i> • <i>Narration</i> • <i>Exposition</i> • <i>Argumentation</i> • <i>Instruction</i> • <i>Records</i> 	<ul style="list-style-type: none"> • <i>Matrices (simple lists; combined lists; intersected lists; nested lists)</i> • <i>Charts and graphs</i> • <i>Locative documents (maps)</i> • <i>Entry documents (forms)</i> • <i>Combination</i> 	<ul style="list-style-type: none"> • <i>Hypertext (index-like; text-embedded)</i> • <i>Interactive</i> • <i>Other Navigation Features (scroll bar; “next page” button; etc.)</i>

How might practitioners make use of this information? Let’s revisit Marco as he plans for his students’ exploration of their health concerns. See EXHIBIT 8.

*EXHIBIT 8: Planning with Content in Mind***Spotlight on Marco: Content**

items in **bold highlight the features of authentic text from EXHIBIT 7*

Marco has decided to frame a unit around health concerns, so he begins to think about the kinds of texts students will read. His program uses an intake form to ascertain what kinds of texts students want to learn how to read (APPENDIX E). He reviews those results for the students in his class. Most students have indicated they want to learn how to read websites more efficiently, which is a natural fit with the context of health concerns. Adults often research their health issues on the Internet. He envisions students conducting a structured investigation about a health concern of their choice and presenting their findings through a class blog in which they share the causes and impacts of their health issue and how they are changed by what they found out. Right now he thinks students will read two texts, one of which will be an Internet article (**digital**) they find. He refers to the features of authentic text from PIAAC, keeping in mind the context of the reading students will be involved with as they explore their health concerns, as well as their past experiences with reading. In reading about their health concerns, students will naturally encounter a great deal of **exposition**, so Marco decides to make that the focus from the rhetorical stances category. This topic will likely employ the use of tables to convey information, so Marco thinks it is a good opportunity to provide instruction in reading and constructing **tables (intersected list)**. Because students will also be working on websites, he decides to provide instruction and practice with **index-like links** to help them go right to the specific information they need. He also wants to provide continued practice with **other navigation features**.

For teachers accustomed to relying on discipline-specific textbooks, the PIAAC categories and descriptions provide a way to consider the more authentic types of texts adults need to experience in the classroom to be prepared to navigate the often complex literacy tasks they will increasingly encounter in their homes, their workplaces, and their communities. Are students being taught the social functions, formats, and skills related to common rhetorical stances? Are they receiving practice in the various kinds of non-continuous texts? Are they actively maneuvering through digital texts, learning what to ignore and what to target to find the information they need? All three categories need not be represented in one unit (as they are in Marco's); however, it is a good idea for practitioners to think carefully about these kinds of questions as they design learning experiences for their adult learners.

**Take-Away**

What are the implications of the *Content* part of PIAAC's conceptual framework for adult literacy practitioners?

- Use a variety of kinds of texts for instruction: print-based and digital, continuous and non-continuous.
- Select texts from across the full range of rhetorical stances, providing sufficient practice with each.
- Be intentional about sampling from across the various types of non-continuous texts when planning instruction/developing curriculum.
- Consider using PIAAC's simple scheme for the basic features of digital texts. Other resources can be employed as well, but this scheme is a useful introduction for practitioners new to teaching digital literacy.

Cognitive strategies. The third basic element in the PIAAC framework is *cognitive strategies*, those “processes that adults must bring into play to respond to or use given content in an appropriate manner” (OECD, 2013b, p. 59). Three main sets of cognitive strategies were assessed in the literacy domain: 1) access and identify; 2) integrate and interpret (relating parts of text to one another); and 3) evaluate and reflect. While other cognitive strategies may be relevant for any particular real-life task, these three were deemed sufficiently prominent in importance to be assessed on the last three international assessments. Let’s look at each in turn:

- **Access and identify.** A significant aspect of what adults do with text is locate information—contact numbers, addresses, deadlines for a project, directions for how to do something, arguments for a topic under discussion. Thus, the first set of cognitive strategies—*access and identify*—refers to finding information in a text. Sometimes this can be a rather straightforward exercise, identifying a single piece of literal information that is “right there.” However, sometimes tasks of this type can be challenging. They might involve making inferences and/or drawing upon understanding of formats and the social functions of texts, knowing, for instance, how authors tend to organize arguments or how webmasters tend to organize websites. Thus, these questions are not necessarily easy. The expert group identified two subtypes of *access and identify* strategies: locating refers to finding just one piece of information, and cycling refers to finding multiple pieces of information.
- **Integrate and interpret (relating parts of text to one another).** Another major aspect of what adults do with text is to connect different parts of a text with each other. They must understand how the end relates to the beginning, how an anecdote supports an argument, how a graph depicts a point. A major part of the PIAAC literacy assessment, then, targets the cognitive strategy *integrate and interpret*. To integrate and interpret is to involve the reader in determining the relationship between different parts of a text, whether that relationship is explicitly stated or not. Common relationships include problem-solution, cause-effect, category-example, equivalency, compare-contrast, and whole-part (e.g., determining the purpose of a text or its main theme).
- **Evaluate and reflect.** The ubiquity of text in today’s world makes it essential to be able to separate the relevant from the irrelevant, the reliable from the unreliable. This is especially true when we remember that online texts may be posted by anyone, regardless of his or her credentials or expertise, and may be left online long after the timeliness of the content has passed. The third PIAAC cognitive strategy, *evaluate and reflect*, addresses this often difficult process of determining the quality of information, taking into consideration that readers often incorporate information, ideas, or values beyond the text to decide its relevance and credibility for an issue at hand. Readers may also need to attend to such factors as a text’s purposefulness, register, structure, accuracy, timeliness, and use of evidence and language.

EXHIBIT 9 demonstrates how Marco thought about cognitive strategies when planning instruction.

*EXHIBIT 9: Planning with Cognitive Strategies in Mind***Spotlight on Marco: Cognitive Strategies**

Marco thinks about the type of reading students will encounter as they read about health concerns in this unit, what they need to learn to read those texts, and what he is responsible for teaching students at this level. He notes that he has decided to focus instruction on exposition (rhetorical stance), tables (non-continuous text format), and text-embedded links/other navigation features. Now as he ponders the cognitive strategies he needs to target, he looks through the PIAAC descriptions of each. Since students will be looking for specific kinds of information about their health concerns and will be navigating websites, Marco knows he will need to provide instruction in **access and identify**, specifically, he thinks, locating information using index-link links, headings, and key words related to causes/risks. Another focus will need to be **integrate and interpret**, notably *cause and effect*, since health concerns are often discussed in terms of prevention/causes and treatment. He has traditionally thought of *cause and effect* as text structure³, and he can think of ways to bring in graphic organizers to help students analyze the expository text they are reading. Since students will be researching health concerns on the internet (even with restricted websites), Marco feels he should also teach them some basics about **evaluate and reflect**, specifically considering the credibility of the source of information.

Let's make note of a few aspects of Marco's planning. First, Marco is using a unit structure—linked lessons related to the same topic—to plan instruction. That means students will be reading multiple texts over time, with ample opportunities for Marco to teach and for students to practice and integrate *several* strategies within one unit. Identifying *specific* strategies (e.g., locating information using index-link links, headings, key words, identifying cause and effect; evaluating credibility of sources) within each Cognitive Strategies category enables him to proceed in his planning with clarity of intent. Exploring a health concern utilizes a great many skills/strategies, but Marco cannot teach them all to students with the same intensity. He must use the time he has with students in a focused manner. Thus, he targets just a few strategies so he can provide the intensity of instruction needed for students to learn them well.

Secondly, note that Marco did not need to select strategies from across all three PIAAC sets of Cognitive Strategies. He did so in this case because it made sense for what the real-world task would ask of students—and he thought he could focus the instruction appropriately to provide enough practice in each strategy. In many units, however, teachers may draw from only one or two of the PIAAC sets of cognitive strategies.

In fact, Marco need not have limited his strategy selection to just the three sets of Cognitive Strategies identified in the literacy framework at all. The PIAAC literacy expert group restricted the international assessment to these broad sets of highly relevant strategies for the purposes of the international survey; however, there are other skills and strategies that students may need to learn in order to accomplish the wide assortment of tasks imaginable on the proficiency continuum for literacy. Practitioners should feel free to incorporate other skills and strategies into instruction as required by the tasks students are attempting, the content standards they are required to teach, and the reading components (e.g., phonics, vocabulary) students need to develop. The inclusion of the Cognitive Strategies in the PIAAC framework helps us remember, though, that 1) adults use strategies/skills in the pursuit of real-world reading tasks

³ *Text structure* refers to common patterns authors use to organize ideas within a written text. For more information, see <http://www.adlit.org/strategies/23336>.

(and that’s, ultimately, how we should teach them) and 2) the three identified sets have high-utility in adult reading activity.



Take-Away

What does the identification and inclusion of these three sets of *Cognitive Strategies* in the PIAAC literacy assessment mean for adult educators?

- Practitioners should think about what strategies/skills adults need to use to accomplish literacy tasks at home, at work, and in the community and be sure to teach these.
- The three sets of Cognitive Strategies identified by the Literacy Expert Group--**access and identify**, **integrate and interpret**, and **evaluate and reflect**—are a good place to start when making decisions about what to teach.
- Instruction need not be limited to just these three sets.

PD Reflection/Discussion

What benefits do you see in using the PIAAC categories for delineating each basic task element (Context, Content, and Cognitive Strategies)? How might you and/or your program incorporate these into your planning?

Factors Affecting Task Difficulty

So far we’ve explored PIAAC’s definition of literacy and the basic elements for describing literacy tasks. Now let’s take a look at how the expert group thought about task difficulty. The notion of literacy as a continuum, as PIAAC defines it, begins with the idea that individuals draw on sets of knowledge and skills to read certain kinds of texts for certain kinds of purposes in certain kinds of contexts. The further along the proficiency continuum the overall performance of an individual is, the more sophisticated the sets of knowledge and skills she is able to draw upon to read more complex texts, for a greater range of purposes, in a greater range of specific contexts. While we usually think about a continuum in terms of individual adult *skills* (e.g., see the leveled standards in the CCRS), the PIAAC team had to think about adult *tasks* at different points along a continuum in order to level where adults’ abilities fall. As part of their work, the literacy expert group identified factors that affect the difficulty of the reading tasks. These factors can help practitioners adjust reading activities to provide appropriate challenge for students. Let’s look at each of these factors briefly.

- **Semantic complexity and syntactic complexity** – Such things as how concrete (person, place, or thing) versus abstract (idea, conditions, principles) the topic and vocabulary are can affect the difficulty level of a text, and thus any activity that involves the text. Likewise, the grammatical structure of the writing affects the overall readability of the text. Sentences that are short and similar to the oral

language of the reader tend to be easier to read than long and complex sentences, composed of such things as subordinate clauses and descriptive phrases.

- **Degree of complexity in making inferences** – Comprehension can also be challenging if connections between parts of the text are unclear or if the connection between the text and what we are to do with it is unclear. The PIAAC expert group identified multiple levels of inference-making. Making inferences at the *paraphrase level* simply requires readers to replace a word with a synonym (e.g., “automobile” for “car”), whereas making inferences at a *higher level* requires inferences about aspects of the task (e.g., determining the proposed solution to a community problem in an open letter to a local task force when the solution is not clearly stated as such.) In *extra-textual level* inferences, readers use information from another text or from their prior knowledge to understand the text.
- **Amount of information needed** – Processing larger amounts of text is usually a more difficult task than processing smaller amounts of text.
- **Transparency of the information** – In general, it is easier to find information in text when it is well labeled, clearly signaled, and well matched to the expectations we have as the reader. For instance, it’s easier for us to find a telephone number from a page with other numbers on it if TEL precedes the number we need. In general, signal words, clear headings or sub-headings, and other explicit references enhance the transparency of information. Conversely, something is more difficult to read when these cues are missing.
- **Prominence of the information** – Information found in recognizable parts of the texts are usually easier to identify. For instance, information located at the beginning or end of a list or paragraph, or in a main clause, is easier to find than information in the middle of a list or paragraph or in a subordinate clause. Basically, the more “buried” the information is, the harder it is to find.
- **Competing information** – Having to sift through other potentially relevant but incorrect information makes a task more complex.
- **Text features** – Tasks tend to be more difficult when the reader has to work to determine how different parts of the text relate to each other, as opposed to having clear signals from the author (in the form of transitions or orienting statements) or text features (like headers).

It might be useful here to think about how these factors affecting task difficulty are similar and different from concepts currently used in adult education. **Semantic complexity and syntactic complexity** and **text features** most closely connect to the “text complexity” and “readability” concepts we use to talk about matching students with text in standards-based reading education. Using quantitative readability formulas in conjunction with a qualitative analysis of the text is an accepted practice for deciding if a text is at an appropriate level for students to be able to read a text for general understanding (see Pimentel, 2013, p. 118).

However, most of the other difficulty factors described above involve a dynamic interaction among the **reader’s skills**, the **reading task**, and the **text itself**. In other words, the focus in PIAAC is on *reading in order to use the information for a specific purpose*. That purpose requires a different kind of attention to the text than reading for general understanding. Considering all the factors of task difficulty enables us as practitioners to match more precisely a reading task with the targeted level(s) of students.

For an example, let’s look in on Marco one more time. In developing his unit on health concerns, Marco has thought carefully about the context, activity, texts, and skills in his unit. There’s at least one additional step though, that Marco wants to complete in his planning. His class is structured to serve “intermediate” students, but he knows that there is quite a range of ability levels within that rather broad category. He’s actually teaching students at two National Reporting System (NRS; 2016) levels (low-intermediate and high-intermediate) and five grade levels (4.0-8.9). He has found that thinking through the factors affecting task difficulty ensures that he is structuring tasks that appropriately challenge students so that they progress along the proficiency continuum. Specifically, he wants to select texts, target needed skills, and scaffold learning to support his learners. EXHIBIT 10 shows the questions he keeps in mind as he structures the unit.

EXHIBIT 10: Guiding Questions for Planning for Task Difficulty

Factor Affecting Task Difficulty	Questions to Ask
Semantic complexity and syntactic complexity	<ul style="list-style-type: none"> Is the topic—and its associated vocabulary--concrete or abstract? How complex is the sentence structure of most of the sentences in the texts to be used?
Degree of complexity in making inferences	<ul style="list-style-type: none"> What kinds/levels of inferences will students have to make? Will the inferences come from information in the text, or will they need to use prior knowledge or information from another text?
Amount of information needed	<ul style="list-style-type: none"> How much text will students need to process? Do they have the strategies they need to process texts of that length?
Transparency of the information	<ul style="list-style-type: none"> How clearly is key information signaled in the text? Do students know what key words to look for?
Prominence of the information	<ul style="list-style-type: none"> Where is the information that students are most likely going to use? (Remember that information at the beginning or end is easier to locate than information in the middle.)
Competing information	<ul style="list-style-type: none"> Is there information that seems to be relevant but isn’t? (For instance, students exploring possible career interests might be finding out annual income. Having other dollar amounts in the text--cost of training, monthly income--would require a higher level of close reading than text with only one dollar amount in it.)
Text features	<ul style="list-style-type: none"> Do the texts use a common text structure (e.g., description, sequence, cause and effect, compare/contrast, problem/solution) that students have studied, one that needs to be taught, or unique organizations that students will need to discern? Are cues such as headings, signal words, and other transitions provided, or do students have to make sense of the organization themselves?

Adult education classrooms can be challenging settings in which to teach, a fact that becomes all too clear to Marco as he ponders these factors affecting task difficulty for his particular unit. EXHIBIT 11 describes his realizations for the unit he’s designing.

EXHIBIT 11: Example of Using the Factors Affecting Task Difficulty (Marco)

Spotlight on Marco	
Factor Affecting Task Difficulty	Notes
Semantic complexity and syntactic complexity	Marco decides that although the notion of a health concern itself is a rather concrete topic, the terminology students are likely to encounter as they read about it may be foreign or be accompanied by misconceptions. In determining words to use for his content-specific (Tier 3 ⁴) vocabulary instruction, he decides to focus on terms that would be common across many health concerns (e.g., <i>glucose</i> , <i>acute</i> , <i>chronic</i>). He will continue his regular instruction in general academic (Tier 2) words as well. He then looks through his go-to sources (see APPENDIX F) to find texts that vary in readability levels for the range of abilities in his class to use in lessons. He also targets health websites for the lower and higher ends of the spectrum for students to use in their own research and makes a note to remind students of the strategies they have practiced for finding material “at their level.”
Degree of complexity in making inferences	When Marco looks through the kinds of material he was able to find on various health concerns, he notices that, in order to get the low readability scores, authors left out key information that linked ideas. Thus, readers would have to make relatively high-level inferences. He tags some of the texts and decides to add a lesson on inferencing for the low-intermediate students.
Amount of information needed	Since the Internet sites Marco finds tend to have dense information, he prioritizes those that at least chunk the information into short sections. He also chooses overall shorter pieces for the low-intermediate students. Thinking about this factor also leads Marco to make a note to talk to students about how they can manage some of the more challenging material, if it is chunked into sections with headings—and they stop and process each section, using the verbal retell strategy they have learned earlier.
Transparency of the information	Again, since the information in the authentic materials they will be using tends to be dense, Marco looks for texts that have clear headings for the low intermediate students. He will need to draw their attention to the role headings and subheadings will play in their task. In general, he plans to direct low-intermediate students to materials with clear labels and will be seeing how well they are able to follow them; he will be attentive to how well the high-intermediate students manage texts with less-clear cues.
Prominence of the information	Marco thinks his strategy related to transparency will address prominence as well.
Competing information	Marco discerns that wading through competing information is going to be the main problem for students. The higher-level students, especially, will be challenged because of the amount of information available to them in their texts. He has already addressed this issue repeatedly in past units through skimming and scanning, highlighting, and recently through using the website menus, and will remind students of these strategies.
Text features	Getting to this factor, Marco remembers he is teaching cause/effect too! He quickly goes back through some of the texts he has pulled out, identifying good examples of cause/effect text structure. He changes some of his selections, making sure those for the low-intermediate students use expected signal words.

By going through this step of thinking specifically about the different performance levels of students in his class, Marco is better able to target instruction ahead of time—and then adjust as needed in real time—to be sure students are developing as readers. The overall process that Marco has used—from first identifying his context to making adjustments based on factors affecting difficulty—may or may not have taken a good deal of time, depending on how many times he has thought through all these pieces, how familiar he is with this kind of instruction,

⁴ See Curtis (2006) for a description of word tiers and their relevance to adult education.

how well he knows his students and their skill-levels, what support he has from his program, and what kinds of materials he has on hand. What we can deduce though, is that spending this time thinking through and planning for reading instruction up front will enable Marco to be ready to meet students where they are—and be ready to support them in their reading development.



Take-Away

How might practitioners benefit from considering the **factors affecting task difficulty**? The factors:

- Help practitioners move beyond text complexity approaches of matching students and text to a task complexity/difficulty approach of matching students, text, and task;
- Support differentiation across student levels;
- Help practitioners better support students in progressing along the proficiency continuum.

SECTION III: TEACHING AND LEARNING WITH PIAAC LITERACY TOOLS

Now that we've looked at each of the separate elements of the PIAAC literacy framework, it's time to talk about how we put them together to support teaching and learning. The rationale for using PIAAC is evident: the use-oriented conception of competency that underlies the PIAAC literacy definition and framework is highly congruent with research on transfer of learning. In general, the consensus of a substantial body of research in adult literacy education points to the increased likelihood that transfer of learning is enhanced either when there is a considerable overlap between the features of a task in a learning situation and a new task or when a skill is learned and practiced in multiple contexts (NRC, 2012; Perin, 2011).

Since one of our goals in adult education is to help adults build competency in using literacy skills to accomplish real-life goals and purposes, it makes sense that we would want to construct *in-class* reading activities that mirror these *real-life* reading activities. The key elements of the PIAAC framework that we discussed in the last section all contribute to thinking about and constructing these authentic reading activities for instructional purposes, including in ways that make them appropriately challenging to spur literacy development along the continuum.

In the last section we saw how Marco used these individual PIAAC elements to design a unit at the intermediate level. In this section, we'll follow a teacher of beginning adult readers, Sonia, as she uses the PIAAC tools to ensure that she is grounded in the real-life literacy goals and purposes of her students. We'll pay special attention to how Sonia employs the following three-phase process for instructional planning:

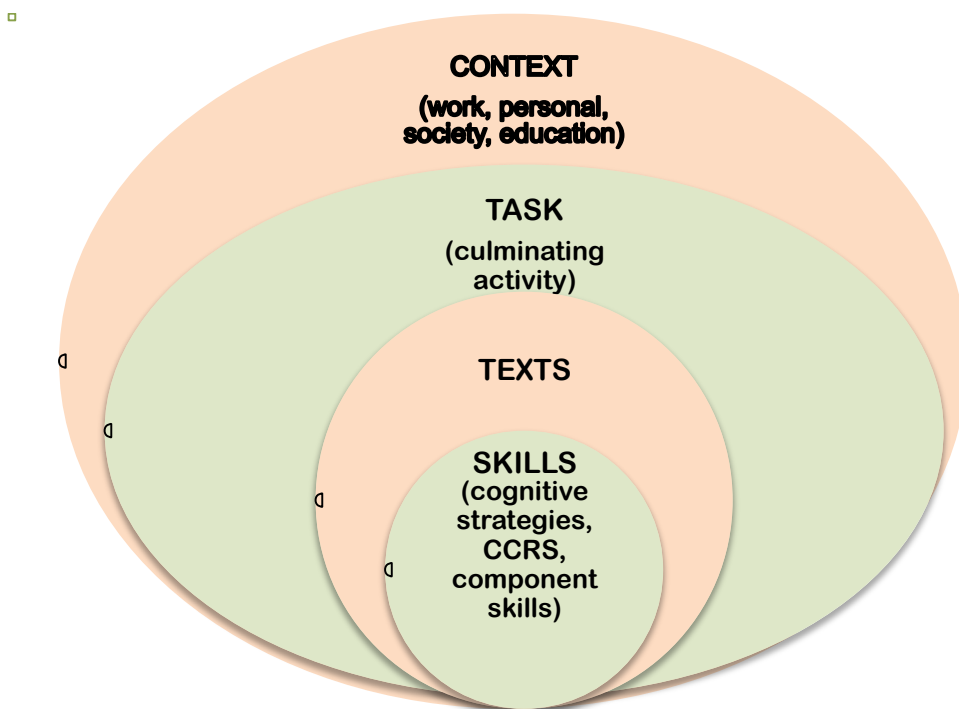
1. Contextualize the skill instruction, using the basic PIAAC framework elements
2. Consider factors affecting task difficulty
3. Embed and sequence instruction in the most relevant skills

As we go, we'll revisit Marco and his classroom to emphasize specific points. By the end, you should have a good idea how to construct curriculum using the PIAAC tools.

Phase 1: Contextualize the Skill Instruction, Using the Basic PIAAC Framework Elements

In Section II, we discussed how an authentic reading task—one that adults undertake in real-life—is defined by its context, content (texts), and cognitive strategies. It might be helpful to think about these basic elements as acting within nested contexts, and to change the language a little bit as we move more fully from the PIAAC framework into our own instructional planning (see EXHIBIT 12). Let's start using the word "skills" to refer to not only PIAAC's cognitive strategies but also the reading components (e.g., phonics, fluency) and other skills articulated by a state's College and Career Readiness Standards. The PIAAC work helps us envision how these **skills** are used in real-life, as we read **text(s)** in the pursuit of an overarching **task**, situated within an authentic adult **context**. By applying this same organizing principle of nesting and contextualizing to construct learning activities, we can provide students with meaningful learning experiences that develop *literacy-in-use* for long-term retention and transfer.

EXHIBIT 12: Model for Contextualized Reading Instruction



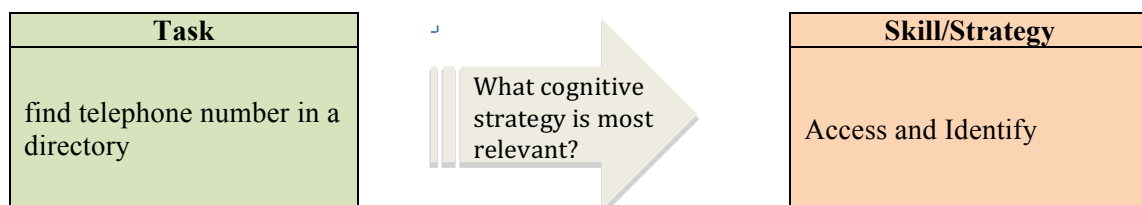
As mentioned earlier, as practitioners we want to try to vary the **tasks** we develop across work, personal, community, and education **contexts**, and choose **skills** from the PIAAC cognitive strategies, the CCRS, and the reading components. We also want to give students practice with different types of **texts**. Let's see how Sonia, a teacher of beginning adult readers, thinks through issues at this step (see EXHIBIT 13).

EXHIBIT 13: Example of Contextualized Skill Instruction (Sonia)

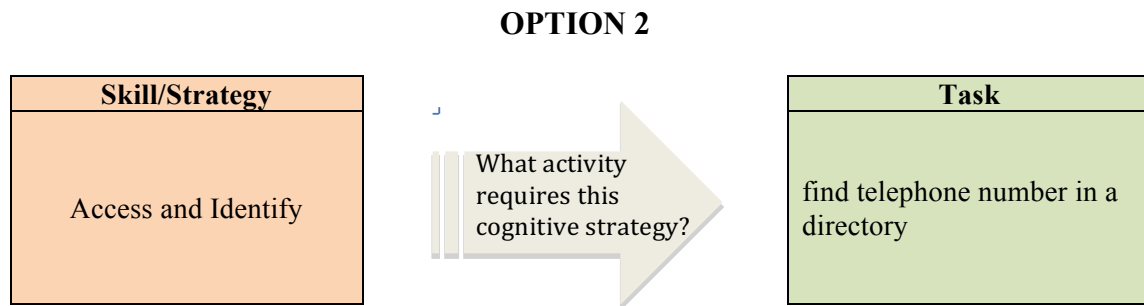
Spotlight on Sonia: Contextualizing the Skill Instruction
<p>Sonia teaches a beginning level class (GLE 0-3) with 8 adult students. She looks for authentic reading tasks that her students at this level can do—and would need to do—in their homes, communities, and workplaces. She uses APPENDIX G as she thinks through her planning.</p> <p>In talking with her students, they identify the need to find contact information for people using a directory. Several have to use directories of phone extensions at work and have avoided using them. Others mention getting teacher lists from their children’s schools with room numbers and phone extensions, but they don’t know how to read them. Sonia explains that some directories are rather complex but that the class can learn the basics of simple directories and some strategies to read them. The class decides the context of the unit will take a work and community focus.</p> <p>Sonia frames the task in the following way:</p> <p style="text-align: center;"><i>By the end of this unit, students will be able to read simple print and online directories in order to locate phone numbers. They will demonstrate their learning by independently finding five phone numbers on a directory for people at a local business, school, or community agency.</i></p> <p>In thinking about the texts, Sonia notes that she will be using non-continuous texts (tables of names and numbers) that are primarily print-based. She is always trying to expose students to digital texts as well, so she makes a note to include her program’s online staff directory and the community college’s directory, accompanied by discussions about why students might find these useful. Students will also be encouraged to bring in directories they have been encountering.</p> <p>Sonia next refers to her CCRS document and unit planning sheet (APPENDIX G) to identify the skills the students will need to work on. The main cognitive strategy associated with using a directory is access and identify, but related strategies include using alphabetic order, scanning, and using text features. A major focus of instruction in her class is always on developing word recognition, vocabulary, and fluency, so Sonia will include lessons in these areas as well.</p>

What Sonia has done so far is make important decisions about the focus of the set of linked lessons she is constructing to teach about using directories. The task statement in italics in EXHIBIT 13 carries a good deal of this focusing work, framing the unit in such a way that it is very clear to her and her students what real-life reading activity they are learning to do. She has articulated a concrete, practical task through which students will demonstrate their learning. She has also clarified what skills are needed to accomplish this task.

Let’s pause for a moment and think about how Sonia arrived at the task and the corresponding target for skill instruction for her unit. In this case, finding a telephone number in a directory—the task—came from the students. Sonia then identified the most obvious cognitive strategy/skill related to accomplishing the task, as displayed in Option 1 below. (Note that she identified others as well, but for simplicity’s sake, we’ll just focus on one for now.)

OPTION 1

Alternatively, Sonia could have decided that she needed to teach *access and identify* and then predicted a task that would require the application of that strategy (see Option 2).



Whether Option 1 or Option 2 is employed, identifying both the task and the targeted skill(s) happens early in the instructional design process. Soon afterwards, lessons that will get students to those outcomes can then be planned. This kind of design is often referred to as **backward design** (Wiggins & McTighe, 2006). The fact that, in Sonia’s unit, the students have informed the context, the task, and even the texts (by bringing in directories they want to read) should foster immediate interest in the unit and continue to lay the groundwork for long-term reading engagement.

The second column in EXHIBIT 14 below provides a snapshot of Sonia’s unit, along with examples of what contextualized units might look like in classrooms at different levels when constructed around these basic unit features.

EXHIBIT 14: Sampling of Contextualized Units

Topic	FINDING CONTACT INFORMATION (low level)	CAREER EXPLORATION (intermediate level)	RESEARCHING TOPICS THAT MATTER (high level)
Context	Community, Work	Work	Education and training, Community
Task	Find contact information in a directory	Compare 3 careers and identify the best fit	Write a letter to an online community discussion board discussing multiple sides of a controversial topic currently in the news (e.g., GMOs, global climate change), making the case for one particular side
Texts	Print-based, digital Non-continuous Records (Simple/simplified online, print directories)	Print-based, digital Continuous; non-continuous Exposition (Online and print career resource materials--e.g., O*NET)	Print-based, digital Continuous; non-continuous Argumentation, Exposition (Student-accessed print and online texts)
Skills	Access and identify; ABC order; scanning; specific sound-symbol correspondences; etc.	Compare and contrast; tables; graphs; text-embedded links	Evaluate and reflect—credibility of sources; argumentation; access and identify—finding diverse sources;

To ensure that these contextualized units do the work intended, practitioners can use the questions in EXHIBIT 15 as a guide.

EXHIBIT 15: Guiding Questions for Designing Contextualized Units

Feature	Questions to Ask
Context	<ul style="list-style-type: none"> • Is the context important to students, either now or in the future? How do you know? • Has there been variety in the contexts covered in previous instruction? If not, is that okay? How do you know? • What do learners already know about the context/topic?
Task	<ul style="list-style-type: none"> • How will students demonstrate their learning of the targeted understandings and skills in a way that is <i>most authentic to the context</i>? (Is the purpose as “real” as possible? Is the audience as “real” as possible? Is the product as “real” as possible?) • Is the task appropriate for the level of the students?
Texts	<ul style="list-style-type: none"> • Will students read print-based or digital texts? Are students being exposed to a both as they progress through units? • Are students reading continuous or non-continuous texts? Are students being exposed to both as they progress through units? • Are students engaging with a variety of rhetorical stances and non-continuous text layouts across the units? Is direct instruction being provided in these?
Skills	<ul style="list-style-type: none"> • Which set(s) of cognitive strategies should be the focal point of instruction (considering level of students)? <ul style="list-style-type: none"> ○ Access and identify ○ Integrate and interpret [problem-solution, cause-effect, category-example, equivalency, compare-contrast, whole-part (e.g., main idea/details, purpose)] ○ Evaluate and reflect ○ Other • Do other reading skills/standards need to be taught, especially vocabulary, comprehension strategies, and other essential components (phonemic awareness/phonics, fluency) for students at the lower levels?

Phase 2: Incorporate the Factors Affecting Task Difficulty

Now that Sonia has envisioned how she will use the basic elements of the PIAAC framework to contextualize the skill instruction, she is ready to think through the interaction of the reader, the text, and the task--and how the difficulty level of the task is affected by this interaction. Remember that the **factors affecting task difficulty** can aid practitioners in ensuring that curriculum is structured to increase student literacy proficiency along a continuum. As rich as Sonia’s unit is already, it would be stronger instructionally to incorporate these factors. EXHIBIT 16 shows how she takes a moment to think through each factor to make sure she is constructing a rigorous learning experience for her students.

EXHIBIT 16: Example of Using the Factors Affecting Task Difficulty (Sonia)

Spotlight on Sonia	
Factor Affecting Task Difficulty	Notes
Semantic complexity and syntactic complexity	Sonia is concerned about the names that will make up the directories. Real names are often not phonetically regular. She decides to first use class names to construct a class directory, and then choose one- or two-syllable names in the practice directories she develops to reinforce some of the syllable patterns students are learning. She will then use authentic directories that students bring in and discuss the realities/irregularities of name spellings and the importance of using strategies to complete the task.
Degree of complexity in making inferences	It occurs to Sonia that students may need to know synonyms for “directory” (e.g., “index,” “contacts”).
Amount of information needed	Even at this level, students are actually at different “levels.” Some students will need shorter directories; otherwise, they will have too much print to process. However, Sonia wants to challenge others with more text. Everyone needs to use headings, ABC order, and scanning to efficiently accomplish the task, so they need enough text to be appropriately challenging.
Transparency of the information	Students will only be looking for names and phone numbers, but Sonia knows that this information needs to be clearly identifiable. Sonia plans to construct or look for directories that are very simply constructed: two-columns and clearly labeled contact information.
Prominence of the information	Sonia makes a note that, starting out, it will be easier for students to find target names at the beginning of a directory, or at the very end. She will gradually incorporate names found in the middle of the directory. (These will also be testing the middle of ABC order, which is a little tricky for the lower-level students.)
Competing information	Sonia checks out a few online directories and sees that a county offices directory she wants to use provides multiple numbers (cell, office, fax), addresses, and work hours. The college directory is also print-heavy. She decides to start with directories that just have names and numbers and then move to ones that have more competing information, helping students “tune out” what’s not needed.
Text features	Directories used will have clear columns, headings (target letters), and labels, but Sonia knows she will need to teach her students how to attend to these.

Taking the time to work through how each of these factors will affect her teaching helps Sonia gain clarity about the kinds of texts she will need for the various students in her class--and how she can best prepare them to be successful in accomplishing the task by the end of the unit. For instance, she is getting a sense of specific kinds of directories she will use throughout the unit.

Because she is actually accessing some of these texts now, she’s also realizing that reading a directory can be quite a difficult task for someone with limited reading skills. As she thinks through the needed strategies and skills carefully, Sonia identifies students who will require more or less support and those who will see some texts and not others. A sequence for texts and lessons is starting to take shape in her mind as well. In truth, a good deal of valuable planning has occurred through this process.

PD Reflection/Discussion

How would using the *factors affecting task difficulty* impact your own planning?

Phase 3: Embed and Sequence Instruction in the Most Relevant Skills

Now Sonia is ready to start planning her skill instruction in earnest. It's important to note that the **skills** circle in the concentric circle graphic represents a “bundling” of integrated skills, and, as such, it will take several lessons and multiple opportunities for practice for students to truly learn them. This is why, like Marco, Sonia uses a “unit” construction to organize teaching and learning.

Skills are at the heart—the center—of the concentric circle graphic and should be the focus of efforts in the contextualized model of instruction. The other features—the topics, tasks, and texts—fuel the skills instruction, providing the source of engagement and, over time, assurance of exposure to a range of authentic literacy situations, to make as certain as possible that the skills are learned in ways that are transferable and long-term. Skills instruction is embedded within these meaningful contexts, intentionally and with attention given to how the adult learner will develop sometimes complex skills and strategies without experiencing undue frustration that can impede learning. Despite our enthusiasm to offer authentic, rich, and rigorous learning experiences, we are also sensitive to the reality that a good many adult learners have learning disabilities or traumas associated with schooling (NRC, 2012). That means we need to sequence and structure instruction carefully. Two concepts—gradual release of responsibility and the whole-part-whole approach—can aid in this work.

Sequencing skill instruction often involves a **gradual release of responsibility** for control from the teacher to the student. The teacher highly scaffolds the use of a new skill early in an instructional sequence, but over the course of instruction she slowly removes the support, building individual accountability for performance of the skill. For example, the teacher might demonstrate how to use a strategy or skill with the initial lesson, then in the following lesson have students practice it in pairs or small groups while providing guidance and feedback, then have students try it on their own, with feedback—all before they are assessed on their ability to use that skill independently. This notion of gradual release of responsibility is important at every level of instruction. Let's revisit Marco to see how he planned to teach his intermediate students *cause and effect* in his unit (see EXHIBIT 17).

EXHIBIT 17: Scaffolding Skill Instruction in Context, #1

Spotlight on Marco: Identifying Cause and Effect Text Structure	
STEP 1: Demonstrate how to highlight cause and effect signal words and complete graphic organizer with text on diabetes. (Discuss implications of article's contents.)	WHOLE CLASS – Teacher models with first paragraph then back and forth discussion for the rest of the 4-paragraph text
STEP 2: Have small groups do same activity with a new text, this one on having a healthy heart (level specific). Have groups share and provide feedback. (Discuss implications of article's contents.)	SMALL GROUP, with teacher feedback
STEP 3: Have individuals read an article related to their selected topic, going through the same process. Debrief/feedback. (Have students make note of how information gleaned relates to their project.)	INDIVIDUAL, with teacher feedback
STEP 4: Individuals choose at least one more of their own texts with which to repeat process and submit work for reading portfolio (with reflection). (Have students make note of how information gleaned relates to their project.)	ASSESSMENT

As Sonia is planning her unit, she similarly plots out how to provide the explicit skill instruction her students need, thinking through how those lessons will be sequenced. EXHIBIT 18 shows her notes as she plans to teach *access and identify* in her unit.

Another concept that can help in sequencing instruction is the **whole-part-whole approach**. In this approach, instruction in a specific skill or strategy (a “part”) is introduced within the context of a complete text or task (a “whole”). It may then be taught and practiced outside of a complete text, but ultimately the students are expected to apply the skill when reading a complete text for an authentic purpose, often a new “whole.” For instance, Sonia might use a directory (“whole”) to point out to students that directories are organized with the names in alphabetical (ABC) order. She might then do some work with ABC order (“part”) outside of directories and then apply the skill within several new directories (“whole”).

As another example, Sonia might also take “cell” from the whole text represented by a directory phone listing of office, cell, and fax numbers to introduce a phonics lesson. This lesson might revolve around the *-ell* pattern (the “part”), using other words such as *bell, fell, well, tell, sell, smell, shell, Nell* (to get in a name) and comparing those with words containing the “-all” and “-ill” patterns⁵. Then students would be asked to attend to these patterns in the names that they read (“whole”) in STEP 2 in EXHIBIT 18. This whole-part-whole approach can similarly be used for vocabulary, phonics, and comprehension instruction⁶.

PD Reflection/Discussion

- Review Sonia’s plan for scaffolded instruction in EXHIBIT 18.
 - In what ways are students supported? challenged?
 - How do you see the concept of *gradual release of responsibility* demonstrated?
 - How do you see the concept of *whole-part-whole* demonstrated?
- What individual or program changes does this section on sequencing skill instruction lead you to consider?

⁵ See p. 60, *Word Sorts for Letter Name-Alphabetic Spellers* (Johnston, Bear, & Invernizzi, 2004).

⁶ NOTE: This last example assumes a “tight” curriculum design, where all aspects of reading instruction (phonics, vocabulary, fluency, comprehension) are related to the same unit topic. For instance, Sonia would also need to include the reading of connected/continuous text in this directory unit, since students at this level need regular practice building word recognition and fluency. Reading directories is not going to provide students this important practice. Thus, Sonia might write simple passages herself related to names or she might have students write (and read) their own stories about how they were named. In fact, the directory task might be part of a larger “umbrella unit” on names. However, constructing a unit so that all aspects of reading instruction are contextualized under one unit frame is a highly sophisticated expectation for curriculum design, one that is difficult for teachers planning “on the fly.” For the purposes of this guide, teachers may realistically only be able to plan in a contextual way for the skills most closely related to the identified task framing the unit and may need to teach/plan for other important reading skills outside of the literacy-in-use unit frame.

EXHIBIT 18: Scaffolded Skill Instruction in Context, #2

Spotlight on Sonia: Finding Phone Numbers in a Directory	
STEP 1	<ol style="list-style-type: none"> 1. Review/discuss what “directories” are and where students have seen them. Share print and online examples. Discuss their purpose. 2. Use a simple, short directory comprised of student names and fake extensions. Read through names using echo strategy. 3. Demonstrate how to use ABC order and headings (based on alphabet) to find a name in the left column. Show how to track over to the right column to identify a phone number. 4. Repeat. 5. Have pairs of students find 3 names on same directory. Discuss issues/strategies. 6. Have individuals find 3 names. Check and debrief.
STEP 2	<ol style="list-style-type: none"> 1. Use simple, longer directory with phonetically-regular names, each with two phone numbers (office/cell). Read through names twice using echo strategy. (Make the point that we are learning to recognize some common names, but that it is not necessary to be able to read all the names in a directory. You just have to find the one you’re looking for.) 2. Using 2-3 names, review how to use ABC order and headings (based on alphabet) to find a name in the left column. Review how to track over to the right column to find phone numbers. Show how to distinguish between “office,” “cell,” and “fax.” 3. Have pairs find office or cell number for 3 names. Check and debrief. 4. Have individuals find numbers for 5 names. Check and debrief.
STEP 3	<ol style="list-style-type: none"> 1. Use the program’s online staff directory, with irregular names and multiple numbers (office, cell, fax, and addresses), discussing why someone would be using that directory. Show how to find the directory on the website, discussing the different names “directory” can be found under (“contact,” “people,” “offices”). 2. Using 2-3 names, review how to use ABC order and headings (based on alphabet) to find a name in the left column. Emphasize how it is not necessary to read all the names in the directory. Review how to use the right column to find phone numbers, reminding students how to distinguish between the different types of phone numbers. Show them that sometimes there are other kinds of information, but if you are just looking for phone numbers, ignore distracting information. 3. Have pairs find office or cell number for 3 names. Check and debrief. 4. Keep in pairs as needed or work individually. Find numbers for 3 names. Check and debrief. 5. Use an authentic and similarly complex directory from a website brought in by a student, or the college directory. Discuss why someone would be using the directory. Repeat the process above.
STEP 4	<p>Provide individual or group practice, with students using print and online authentic directories appropriate for their levels. (NOTE: Some students may be able to look up county offices on the county directory and report to the class how they did that.)</p>
STEP 5	<ol style="list-style-type: none"> 1. Use new authentic directories appropriate for students’ levels (some may be online). 2. Have students find phone numbers for 5 names.

Pulling It All Together

In this section we followed Sonia as she developed a plan of instruction for her beginning adult readers. We saw how she 1) contextualized the skill instruction, using the basic elements of the PIAAC framework, 2) considered factors affecting task difficulty, and 3) embedded and sequenced skill instruction within the overall goal of accomplishing the task. One overarching principle from this section and the last is that individual, disconnected lessons do not typically provide the intensity of engagement with concepts and skills to support transfer to the out-of-school applications students hope to see. Thoughtfully sequenced lessons related to a task—appropriately scaffolded and incorporating the factors affecting task difficulty—power movement along the literacy continuum in noticeable and meaningful ways.

A second overarching principle from this section is that structured and explicit skill instruction is essential, especially since many adult learners in our classes have diagnosed and undiagnosed learning disabilities. We cannot count on students to automatically transfer reading skills taught in the classroom to out-of-school tasks. The very fact that these literacy tasks are often complex suggests that explicit instruction and scaffolded practice is needed for students to gain the confidence they need to use literacy outside the classroom.

Thirdly, we should not expect our students to wait until they have become proficient readers to take on adult reading tasks. The notion of a proficiency continuum for literacy confirms that there are tasks adult developing readers can and need to accomplish now at work, in their communities, and in their homes. Thus, it makes sense that these become an integral part of instruction in our classrooms. The PIAAC framework offers tools for apprenticing adult learners to these adult reading practices, and the curriculum design features offered here provide the structure and support to ensure their success.



Take-Away

What are the implications for planning for teaching and learning to support literacy-in-use?

- Incorporate these 3 steps:
 - Contextualize the skill instruction, using basic PIAAC framework elements
 - Consider factors affecting task difficulty
 - Embed and sequence instruction in the most relevant skills, thinking carefully about the gradual release of responsibility and whole-part-whole instruction as options for explicit instruction.
- Remember to plan for instruction in other important skills/standards (e.g., phonics, vocabulary, fluency, comprehension). These can be carefully connected to the unit topic or taught separately.
- Plan in units (linked lessons).

IV. CONCLUSION

We start and end with an appreciation for the PIAAC definition for literacy, one that prioritizes the desire of adults to participate in society, achieve their own goals, and pursue lifelong learning. These purposes require adults to be able to understand, evaluate, use, and engage with text that is characterized by variability in rhetoric, formats, and features. In an information-rich, economically-advanced society such as ours, the proficiency with which adults are able to navigate these texts for a range of purposes has implications not only for themselves and their families, but for their workplaces, their communities, and for the larger society. PIAAC's work provides us with the means to augment efforts to structure teaching and learning in new ways so that adult learners can become more proficient, can become, in essence, "college and career ready."

In this guide we examined key elements of the PIAAC literacy framework and identified general and specific ways this work might be adapted for use in adult education classrooms. We explored this work through the lens of a contextualized model of instruction since both current theory and research in transfer of learning as well as PIAAC's own use-oriented conception of literacy support such an approach. Practitioners should find relevant for their practice the PIAAC definition for literacy/reading, the basic elements for framing literacy tasks (context, content, and cognitive strategies), the factors affecting task difficulty, and the proficiency continuum. It is worth noting, though, that we should be wary of making assumptions about the correspondences between PIAAC levels (APPENDIX A) and the federal National Reporting System (2016) levels used in adult education. Correspondences between those two schemes have not been established, and it would be difficult for us to attempt those validly on our own.

Our challenge as a field is to continue to find ways to connect with adult learners where they are and with what they want to be able to do. Oriented in authentic adult practice, PIAAC offers us a rich set of tools to do just that. This guide is the first step in envisioning how these tools might be harnessed. The next step is to collaborate with your colleagues to incorporate these key elements into your own classroom and program planning processes in your own idiosyncratic ways. Feel free to use and adjust the materials in the main part of the guide and in the appendices to further this important work in your classroom and in your program.

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APPENDIX A: Level Descriptions and Sample Tasks for PIAAC Literacy Levels

Below Level 1 <i>Adults at this level:</i>	Level 1 <i>Adults at this level:</i>	Level 2 <i>Adults at this level:</i>	Level 3 <i>Adults at this level:</i>	Level 4 <i>Adults at this level:</i>	Level 5 <i>Adults at this level:</i>
<ul style="list-style-type: none"> • Can read brief texts on familiar topics and locate a single piece of specific information identical in form to information in the question or directive • Are not required to understand the structure of sentences or paragraphs • Use only basic vocabulary knowledge <p>Tasks below Level 1 do not make use of any features specific to digital texts.</p>	<ul style="list-style-type: none"> • Can read relatively short digital or print continuous, non-continuous, or mixed texts to locate a single piece of information, which is identical to or synonymous with the information given in the question or directive • Can complete simple forms • Can understand basic vocabulary • Can determine the meaning of sentences • Can read continuous texts with a degree of fluency <p>Texts contain little competing information.</p>	<ul style="list-style-type: none"> • Can read digital or print continuous, non-continuous, or mixed texts • Can paraphrase and make low-level inferences • Can integrate two or more pieces of information based on criteria • Can compare and contrast or reason about information • Can navigate within digital texts to access and identify information from various parts of a document <p>Some competing pieces of information may be present.</p>	<ul style="list-style-type: none"> • Can understand and respond appropriately to dense or lengthy texts, including continuous, non-continuous, mixed, or multiple pages • Can understand text structures and rhetorical devices and can identify, interpret, or evaluate one or more pieces of information and make appropriate inferences • Can perform multistep operations and select relevant data from competing information in order to identify and formulate responses <p>Competing information is often present but is not more prominent than the correct information.</p>	<ul style="list-style-type: none"> • Can perform multiple-step operations to integrate, interpret, or synthesize information from complex or lengthy continuous, non-continuous, mixed, or multiple-type texts that involve conditional and/or competing information • Can make complex inferences and appropriately apply background knowledge as well as interpret or evaluate subtle truth claims or arguments <p>Competing information is present and sometimes as prominent as correct information.</p>	<ul style="list-style-type: none"> • Can perform tasks that involve searching for and integrating information across multiple, dense texts; constructing syntheses of similar and contrasting ideas or points of view, or evaluating evidence and arguments • Can apply and evaluate logical and conceptual models, and evaluate the reliability of evidentiary sources and select key information • Are aware of subtle, rhetorical cues and are able to make high-level inferences or use specialized background knowledge
EXAMPLES					
<p>SGIH</p> <ul style="list-style-type: none"> • In this task, respondents are asked to identify a telephone number in a very short advertisement. • The question explicitly refers to literal information in a simple text with little competing information. 	<p>Generic medicines</p> <ul style="list-style-type: none"> • The stimulus is a short newspaper article entitled “Generic medicines: Not for the Swiss.” It has two paragraphs and an EXHIBIT in the middle displaying the market 	<p>Generic medicines</p> <ul style="list-style-type: none"> • The stimulus is a short newspaper article entitled “Generic medicines: Not for the Swiss.” (The same stimulus as that described in Level 1) • The task requires the 	<p>Library search</p> <ul style="list-style-type: none"> • The stimulus displays results from a bibliographic search from a simulated library website. • The test-taker is asked to identify the name of the author of a book called 	<p>Library search</p> <ul style="list-style-type: none"> • The stimulus for this unit consists of two pages from a library website listing results for a search on “genetically modified food.” • This task asks the 	<p>Library search</p> <ul style="list-style-type: none"> • The respondent is asked to identify the book likely to be least useful in providing more information about genetically modified food. • As mentioned in the

Below Level 1 <i>Adults at this level:</i>	Level 1 <i>Adults at this level:</i>	Level 2 <i>Adults at this level:</i>	Level 3 <i>Adults at this level:</i>	Level 4 <i>Adults at this level:</i>	Level 5 <i>Adults at this level:</i>
<ul style="list-style-type: none"> The information is prominently located on a single line in the advertisement, labeled by an abbreviation for the word “telephone.” 	<p>share of generic medicines in 14 European countries and the United States.</p> <ul style="list-style-type: none"> The test-taker is asked to determine the number of countries in which the generic drug market accounts for 10% or more of total drug sales. The test-taker has to count the number of countries with a market share greater than 10%. The percentages are sorted in descending order to facilitate the search. The phrase “drug sales,” however, does not appear in the text; therefore, the test-taker needs to understand that “market share” is a synonym of “drug sales” in order to answer the question. 	<p>respondent to use the text of the newspaper article. Here the respondent is asked to identify two reasons given in the text for the limited use of generic medicines. Previous research has shown that tasks requiring multiple responses tend to be more difficult as respondents must search through the text more than once.</p> <ul style="list-style-type: none"> While the reasons are explicitly stated in the text, they are not specifically labeled as reasons. Respondents must make an inference based on a semantic cue in the text – the single word “Why?,” which signals that reasons will follow. There are other instances of “reasons” in the text (such as why generic medicines are less expensive, signaled by the explicit “because”) that might serve as distractors. 	<p><i>Ecomyth</i>.</p> <ul style="list-style-type: none"> To complete the task, the test-taker has to scroll through a list of bibliographic entries and find the name of the author specified under the book title. In addition to scrolling, the test-taker must be able to access the second page, where <i>Ecomyth</i> is located by either clicking the page number (2) or the word “next.” There is considerable irrelevant information in each entry to this particular task, which adds to the complexity of the task. 	<p>reader to find two books that argue against genetically modified foods, requiring the respondent to examine the brief descriptions of all the books and decide which best meet that criterion.</p> <ul style="list-style-type: none"> The respondent must scroll through the full list, using both pages on the website, to make inferences and compare the descriptions in the 10 entries. As the task asks for two books, the respondent must cycle through the text twice to locate both responses. 	<p>framework, negative phrasing is more complex than affirmative, so evaluating the 10 books in terms of which is <i>least</i> useful for the defined purpose is expected to be difficult.</p> <ul style="list-style-type: none"> The fact that the correct selection is located at the end of the second page of results also increases the difficulty of the task. The respondent must read and evaluate each of the choices in order to make a correct selection.

Adapted from *Sample PIAAC Tasks in Literacy, Numeracy, & Problem Solving in Technology-Rich Environments* (n.d.)

Appendix B: Rhetorical Stances

Description - the type of text where the information refers to properties of objects in space. A page of a manual that identifies the parts of some device, such as a Cuisinart, is a description, as is a verbal depiction of a piece of art.

Narration - the type of text where the information refers to properties of objects in time. Stories recounted to make a point, such as fables, are narrations, as are texts about the steps what an individual took to solve a problem.

Exposition - the type of text in which the information is presented as composite concepts or mental constructs, or those elements into which concepts or mental constructs can be analyzed. The text provides an explanation of how the component elements interrelate in a meaningful whole. A text that explains the nature of some health problem or one that talks about the effect of climate change would be an exposition.

Argumentation - the type of text that presents propositions as to the relationship among concepts or other propositions... An important sub-classification of argument texts is persuasive texts. Newspaper editorials are one example, and advertisements are another.

Instruction - the type of text that provides directions on what to do. Most equipment manuals contain instruction texts, as do other guides, such as those about first-aid or some leisure activity.

Records - texts that are designed to standardize, present and conserve information without embedding in other stances. A table of standings in a sports league is an example of a record, as is a graph of the changes in oil prices. The minutes of a meeting constitute another type of record.

*Adapted from PIAAC *Literacy Conceptual Framework* (2009), p. 12

Appendix C: Layout of Non-Continuous Text

Since adults are confronted with non-continuous text as a regular course, the PIAAC designers developed a scheme for conceptualizing the different types of this kind of material. They identified five major types and sub-types of non-continuous texts:

- **Matrices**
 - **Simple lists** – consists of one category, with a heading, and at least 2 items (e.g., a shopping list, a “To Do” list)
 - **Combined lists** – multiple simple lists wherein one list is always primary and organized to foster finding information in the other lists (e.g., an email Inbox in the primary list for finding related lists of senders, subjects, etc.).
 - **Intersected lists** (tables) – two lists (a row heading and a column heading) that intersect to form a third list of new cells (e.g., TV listing)
 - **Nested lists** – two or more intersecting lists (e.g., table of unemployment rates showing comparable data for males and females for each month)
- **Charts and graphs** – Provide a visual display of quantitative data (e.g., pie charts, bar charts, line graphs).
- **Locative documents (maps)**
- **Entry documents (forms)**
- **Combination**

Appendix D: Digital Text Considerations

New to the international literacy assessments is attention to online texts, which vary in significant ways from print texts. PIAAC considered three major features of digital text when designing the literacy assessment:

- **Hypertext** - Digital texts often offer readers an opportunity to click on a highlighted, colored, or underlined word or phrase to access more text with additional information. Hypertext may be **index-like** in form, where a list of options is provided. An Inbox and a list of headlines on a newsite are examples of index-like hypertexts. Another form is **text-embedded**. These are highlighted (or colored or underlined) words or phrases that are found *within* a complete text. Clicking on these words will send the reader outside the text to another text with more information or to another section of the same text.
- **Interactive** – Some digital texts also have interactive elements, where one or more authors have responded to previous authors to create a chain of texts over time. Understanding one text in the chain may necessitate finding and understanding previous texts. Email discussions and comments on blogs or online new stories are examples of interactive digital texts.
- **Other Navigation Features** – The scroll bar, the “next page” button, and unique elements that appear on a webpage are other features to which readers of digital text need to attend.

Appendix E: Reading & Writing Goal Sheet

(mentioned in EXHIBIT 8)

ACTIVITY	WORK		COMMUNITY		HOME	
	Do you do this now? (✓)	Is this a goal? (✓)	Do you do this now? (✓)	Is this a goal? (✓)	Do you do this now? (✓)	Is this a goal? (✓)
READING						
1. Read directions or instructions						
2. Read letters, memos, or e-mails						
3. Read articles in newspapers, magazines, or newsletters						
4. Read books, fiction, or nonfiction						
5. Read manuals or reference materials						
6. Read bills, invoices, bank statements, or other financial statements						
7. Read diagrams, maps or schematics						
8. Read websites						
9. OTHER						
WRITING						
10. Write letters, memos, or e-mails						
11. Write articles for newspapers, magazines, websites, or newsletters						
12. Write reports						
13. Fill in forms						
14. Write blogs						
15. Write book, TV, movie, or restaurant reviews						
16. Make PowerPoint or Prezi slides for a presentation						
17. Write resumes						
18. OTHER						

**Adapted from the PIAAC Background Questionnaire (2012/2014)*

Appendix F: Finding (Free) Texts for Adult Learners (mentioned in EXHIBIT 11)

The Change Agent

<http://changeagent.nelrc.org/in-the-classroom>

This online magazine is free to all state-funded programs in New England and available by subscription to others. Comprised largely of student-written articles, the issues are themed by social justice issues and provide readability information on texts.

LINCS Learner Center: Learn to Read

<https://learner.lincs.ed.gov/resources/reading>

Developed for direct use by learners, this site can be also used by teachers and curriculum developers as a go-to resource for finding texts and videos on a wealth of topics. Texts are divided into "easier, medium, and harder" levels.

Marshall Adult Education *Reading Skills for Today's Adult*

http://resources.marshalladulthoodeducation.org/reading_skills_home.html

This site provides leveled passages, mostly home-grown, written on a breadth of adult-oriented topics. Best for CCRS Levels A-D.

NewsELA

<https://newsela.com/>

Newsela selects high-level news articles from such news outlets as the Associated Press, *Washington Post*, and *The Guardian* and rewrites them at five different Lexile levels to correspond to the CCRS Levels B-E. Topics include politics, science, and health.

ReadWorks.org

<http://www.readworks.org/>

This is a K-12 site that has a wealth of reading passages (and units) on a variety of topics. Click on "Reading Passages," and then sort by Keyword or Topic to find passages related to your unit. Explore the site for additional resources.

Simple English Wikipedia

https://simple.wikipedia.org/wiki/Simple_English_Wikipedia

This is a simplified version of Wikipedia that uses simpler words, less complex grammar, and shorter sentences.

APPENDIX G: Contextualized Reading Instruction AT-A-GLANCE

(mentioned in EXHIBIT 13)

Context	<p>Work and occupation (e.g., job search, wages, salaries, benefits, being on the job)</p> <p>Personal uses</p> <ul style="list-style-type: none"> • Home and family (e.g., interpersonal relationships, personal finance, housing, and insurance) • Health and safety (e.g., drugs and alcohol, disease prevention and treatment, safety and accident prevention, first aid, emergencies, and staying healthy) • Consumer economics (e.g., credit and banking, savings, and advertising, making purchases, and maintaining personal possessions) • Leisure and recreation (e.g., travel, recreational activities, and restaurants, as well as material read for leisure and recreation itself) <p>Society and community (e.g., public services, government, community groups and activities, and current events)</p> <p>Education and training (e.g., opportunities for further learning)</p>		
Task	<p>Students will _____ in order to _____.</p> <p>They will demonstrate their learning by _____.</p>		
Texts (for students to read)	<table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 50%;"> <p>Medium</p> <p>Print-based</p> <p>Digital</p> <p>Format</p> <p>Continuous</p> <p>Non-continuous</p> <p>Mixed</p> <p>Multiple</p> </td> <td style="vertical-align: top; width: 50%;"> <p>Features</p> <p>Rhetorical stance</p> <ul style="list-style-type: none"> • Description • Narration • Exposition • Argumentation • Instruction • Records • Other _____ <p>Layout of non-continuous text</p> <ul style="list-style-type: none"> • Lists/matrix (simple, combined, intersected, nested) • Chart/Graph • Map • Form • Combination <p>Digital text considerations to be taught</p> <ul style="list-style-type: none"> • Hypertext <ul style="list-style-type: none"> ○ Index-like ○ Text-embedded • Interactive • Other _____ </td> </tr> </table>	<p>Medium</p> <p>Print-based</p> <p>Digital</p> <p>Format</p> <p>Continuous</p> <p>Non-continuous</p> <p>Mixed</p> <p>Multiple</p>	<p>Features</p> <p>Rhetorical stance</p> <ul style="list-style-type: none"> • Description • Narration • Exposition • Argumentation • Instruction • Records • Other _____ <p>Layout of non-continuous text</p> <ul style="list-style-type: none"> • Lists/matrix (simple, combined, intersected, nested) • Chart/Graph • Map • Form • Combination <p>Digital text considerations to be taught</p> <ul style="list-style-type: none"> • Hypertext <ul style="list-style-type: none"> ○ Index-like ○ Text-embedded • Interactive • Other _____
<p>Medium</p> <p>Print-based</p> <p>Digital</p> <p>Format</p> <p>Continuous</p> <p>Non-continuous</p> <p>Mixed</p> <p>Multiple</p>	<p>Features</p> <p>Rhetorical stance</p> <ul style="list-style-type: none"> • Description • Narration • Exposition • Argumentation • Instruction • Records • Other _____ <p>Layout of non-continuous text</p> <ul style="list-style-type: none"> • Lists/matrix (simple, combined, intersected, nested) • Chart/Graph • Map • Form • Combination <p>Digital text considerations to be taught</p> <ul style="list-style-type: none"> • Hypertext <ul style="list-style-type: none"> ○ Index-like ○ Text-embedded • Interactive • Other _____ 		
Skills (PIAAC Cognitive Strategies, CCRS, Reading Components)			