EDUCATION RESEARCH PROGRAM

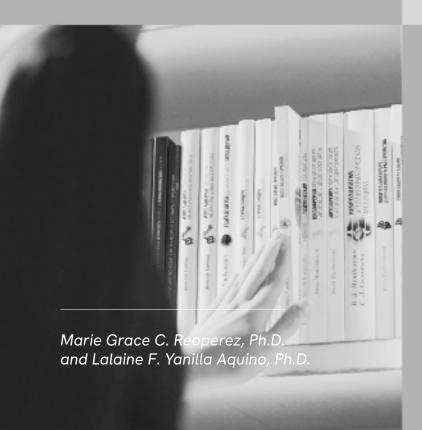
Developing a Theoretical Framework

for the Multiliteracy Assessment of Multilingual Adolescent Learners



Developing a Theoretical Framework

for the Multiliteracy Assessment of Multilingual Adolescent Learners



UP CIDS Discussion Paper Series

is published by the

University of the Philippines Center for Integrative and Development Studies Lower Ground Floor, Ang Bahay ng Alumni Magsaysay Avenue, University of the Philippines

Magsaysay Avenue, University of the Philippines
Diliman, Quezon City 1101

Telephone: (02) 8981-8500 loc. 4266 to 4268 / (02) 8426-0955

Email: cidspublications@up.edu.ph

Website: cids.up.edu.ph



cids.up.edu.ph

Copyright 2025 by the UP Center for Integrative and Development Studies

The views and opinions expressed in this discussion paper are those of the author/s and neither reflect nor represent those of the University of the Philippines or the UP Center for Integrative and Development Studies. No copies can be made in part or in whole without prior written permission from the authors/editors and the publisher.

ISSN 2619-7448 (Print) ISSN 2619-7456 (Online)

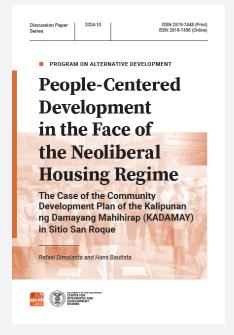
Cover image credit

"Woman in White Long Sleeve Shirt Writing on White Paper."

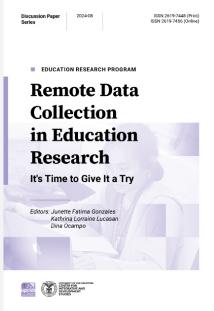
Cottonbro studio, Pexels, https://www.pexels.com/photo/woman-in-white-long-sleeve-shirt-writing-on-white-paper-4855328/

Download related policy papers

for free



People-Centered Development in the Face of the Neoliberal Housing Regime



Remote Data Collection in Education Research

cids.up.edu.ph/collection-database

Get your policy papers published.

Download open-access articles.

The Philippine Journal of Public Policy: Interdisciplinary Development Perspectives (PJPP), the annual peer-reviewed journal of the UP Center for Integrative and Development Studies (UP CIDS), welcomes submissions in the form of full-length policy-oriented manuscripts, book reviews, essays, and commentaries. The PJPP provides a multidisciplinary forum for examining contemporary social, cultural, economic, and political issues in the Philippines and elsewh ere. Submissions are welcome year-around.

For more information, visit cids.up.edu.ph.
All issues/articles of the PJPP can be downloaded for free.

Get news and the

latest publications.

Join our mailing list to get our publications delivered straight to your inbox! Also, you'll receive news of upcoming webinars and other updates.

bit.ly/signup_cids

We need

your feedback.

Have our publications been useful? Tell us what you think.

bit.ly/dearcids

DEVELOPING A THEORETICAL FRAMEWORK

for the Multiliteracy Assessment of Multilingual Adolescent Learners

Marie Grace C. Reoperez, Ph.D.

University of the Philippines Diliman

Lalaine F. Yanilla Aquino, Ph.D.

University of the Philippines Diliman

[©] CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES UNIVERSITY OF THE PHILIPPINES

HIGHLIGHTS

- This study proposed a multiliteracy assessment framework for multilingual adolescent learners that a) emphasizes the role of language competency, context, and background of the learners; b) identifies the literacy skills they need to develop; and c) considers external factors and conditions that affect literacy assessment outcomes.
- One of the major findings of this study shows that knowledge and proficiency in the target language are better predictors of multilingual learners' assessment performance. Moreover, an equitable literacy assessment has to consider the personal and cultural background of the learners as well as the other contextual factors and conditions that they bring into the assessment process. More importantly, designing a multiliteracy assessment will help identify the literacy skills that adolescents are competent at and those that they are still struggling at.
- Finally, while content literacies are targeted at literacy assessment for adolescent learners, it is the basic literacies that provide support in developing the former. Thus, these essential literacies have to be integrated in the literacy assessment design.

INTRODUCTION

Assessment gives direction to literacy teaching and learning process (International Literary Association [ILA] 2020; Dray et al. 2019; Childress, Backman, and Lipson 2019; Hostetler, Luo, and Stefaniak 2018; Duke and Roberts 2010). It informs instruction in many ways. Assessment results guide teachers to make important instructional decisions regarding the nature of student learning. They help identify the conditions that allow learners to succeed or that adversely affect their learning performance (Risko and Walker-Dalhouse 2010). Without effective assessments that can provide meaningful and trustworthy information about the specifics of the learners' strengths and limitations, we risk missing the opportunity to plan a truly responsive instruction (National Institute of Literacy [NIL] 2007; Gillet, Temple, and Crawford 2012; Russel 2013).

In literacy education, the role of assessment in the development of learners is crucial. ILA (2016) defines literacy as "the ability to identify, understand, interpret, compute, and communicate using visual, audible, and digital materials across disciplines," (p. 1). This definition suggests that literacy is multidimensional, dynamic, and complex. It mirrors the nature of assessment required to guide learners in developing advanced literacy skills, become functionally literate, and competent in multiple modes of learning (Cloonan, Hutchison, and Paatsch 2016).

However, literacy learning among adolescent multilinguals is influenced by several complex factors. Successful reading in the primary grades does not necessarily translate into successful reading in the intermediate grades and beyond (Moore et al. 1999; Siebert et al. 2016). At each stage of reading development, learners must build new skills to develop while strengthening the foundational ones acquired in the primary grades. As content learners, adolescents should develop both general comprehension and discipline-specific skills to interrogate various types and genres of texts, enabling effective content acquisition (Noguerón-Liu 2020; Butvilofsky et al. 2020; Fisher and Frey 2015). Yet content learning assessment seldom goes beyond evaluation of content knowledge (Afflerbach 2017; NIL 2007).

Moreover, language forms and features further complicate reading, writing, and communicating for second language (L2) learner, such as Filipino students who are learning English or other foreign languages. For many students learning English as a second language (ESL) or a foreign language (EFL), lack of or limited language knowledge is often the primary source of text comprehension difficulties (Collins et al., 2021). While their interaction in the literacy learning process has been widely explored, less attention has been given to how they predict learners' literacy assessment performance.

Multilingual adolescents may struggle with multiple aspects of literacy learning due to the interaction among language competence, content literacy learning, and other related factors. These have significant implications for the type of assessment we provide. By designing assessments sensitive to learners' literacy needs and the nature of their literacy development, we can help adolescent learners progress along the learning continuum (Childress et al. 2019).

This paper reviewed and evaluated various studies on the literacy assessment among adolescent learners. By examining evidence from these studies on effective ways to assess adolescent literacy competence, this paper intends to identify, analyze, examine, and evaluate the factors that inform the planning, designing, and constructing of relevant and appropriate assessment tools for multilingual learners.

METHODOLOGY

Research Design

This paper aims to provide in-depth information on the study and practice of developing assessment tools for multilingual adolescent learners. We hope to contribute to a deeper understanding of the nature and types of assessments that are responsive to, and sensitive to, the literacy needs of this group, as well as the processes involved in developing such assessments. We approach this inquiry using the literature review method, which allowed us to integrate and synthesize research findings and perspectives from empirical data (Tranfield et al. 2003). To identify, collect, and analyze relevant research evidence and traditions in literacy assessment, we chose the semi-systematic approach among other literature review methods (Witell et al. 2016). This approach also

allows flexibility in both article selection and data analysis procedures, as both quantitative and qualitative investigations were reviewed.

Instrumentation and Procedure

In a literature review method, the most important instruments are the researchers. Macinnis (2011) pointed out that key characteristics of literature review researchers include advanced skills, such as superior conceptual thinking, and transparency in documenting the analysis process. We, the researchers, have many years of experience in teaching, training, conducting research, and developing literacy assessments for adolescent learners.

The steps in the literature review process followed those for a semi-systematic review (Snyder 2019). First, we determined the inclusion criteria for the studies to be reviewed, including both quantitative and qualitative studies. Regardless of the publication date, studies yielding relevant results were considered. Relevant topics pertained to the assessment of different literacy skills among multilingual learners in literacy and content subjects. Thus, studies on EFL and ESL learners were generally selected. We also reviewed works that, although not directly involving multilingual learners, provided results essential for developing assessments for adolescent learners. Some of these studies focused on the alignment between assessment and instruction and test item analysis. After identifying the articles to be included, the review process proceeded. A qualitative approach was used in data analysis, which involved identifying, analyzing, and reporting similar patterns in terms of problems investigated, participants involved, and themes, among other factors.

REVIEW OF RELATED LITERATURE

Literacy Skills

The development of foundational skills is an ongoing process for multilingual adolescent learners, especially in their second language (Van Gelderenet al. 2007). This process is particularly challenging because learners must also acquire content literacy skills simultaneously. Well-developed key literacy skills are prerequisites for meaningful content learning. Unfortunately, both key and content literacy skills are rarely considered in assessments (NIL 2007; Afflerbach 2017). Studies on predictors of literacy assessment performance

among adolescent and multilingual learners have found that open-ended foundational language and literacy skills, such as vocabulary knowledge and academic language skills, are major and consistent predictors of literacy assessment performance (Collins, Lindstrom, and Sandbank 2021). Each of these skills continues to contribute to learning, even at the intermediate and secondary levels, which are primarily focused on content area learning (Fisher and Frey 2019; Shanahan and Shanahan 2008). Assessments are valuable when they provide information that guides the teachers in making the necessary instructional adjustments to the skills that are being developed (Afflerbach 2017).

Decoding

Adolescent learners are expected to be proficient decoders, as decoding—the ability to decipher words out of a group of symbols and sounds—should have been acquired in the early grades (NIL 2007). For additive bilinguals, such as Filipinos, decoding in the second language like English, might not develop simultaneously with their first language during the early literacy stage (Lemhöfer et al. 2008; Van Gelderen et al. 2007). However, by the time they reach intermediate grades, Filipino students should be proficient in decoding English, as most textbooks are written in this language.

It is quite challenging when adolescents' phonological and phonemic awareness, along with other decoding-related constructs, do not develop well, as these are major prerequisites for reading (Perfetti and Stafura 2014; Perfetti and Hart 2001). In the context of second language reading, decoding extends beyond simple word identification skills. Students who are knowledgeable of grapho-phonic relationships of the target language are more likely to succeed as content learners (Perfetti and Statura 2014). Conversely, those who lack this knowledge will struggle to read and comprehend content-area texts and build content vocabularies.

Fluency—the ability to engage in accurate, automatic, and prosodic reading—contributes to proficient reading (Kuhn and Schwanenflugel 2019; Schwanenflugel and Kuhn 2016; Samuels 2013; Benjamin and Schwanenflugel 2010; Kuhn, Schwanenflugel and Meisinger 2010; Rasinski 2006). Fluent readers automatically recognize words and their meanings, allowing them to read with fluidity and understand the deeper meaning of the text (NIL 2007).

This in turn, enables readers to focus more on the higher-order process of reading (Samuels 2013; Samuels 2006). Although automatic reading does not guarantee comprehension, spending more cognitive resources on higher-order processes increases the likelihood of arriving at the most plausible interpretation of the text.

However, there are concerns regarding fluency instruction and assessment among multilingual learners in Grades 4 to 12. Foremost among these is the perception of fluency as a foundational skill for learning to read, but not for intermediate and secondary levels (Rasinski et al. 2016; Rasinski, Rikli, and Johnston 2009). The increasing complexity of texts in content areas demands sophisticated fluency skills. Bilingual adolescent readers may have acquired proficiency in the word recognition accuracy and automaticity, but this alone is insufficient for proficient reading (Reoperez 2018; Rasinski et al. 2016). Prosodic reading, the most complex fluency component, is largely influenced by language knowledge and continues to develop until the end of high school (Reoperez 2018).

Another concern is on the use of oral reading fluency data to predict the overall reading performance of English language learners and its potential for misidentifying reading problems, which has not been well-documented (Quirk and Beem 2012). The functional relationship between fluency and reading comprehension among second language learners requires further investigation. Additionally, the common practice of measuring oral reading fluency in relation to comprehension skills overlooks the possibility that silent reading fluency may be more closely related to comprehension processes needed in the upper grades (Spichtig et al. 2022; Quirk and Beem 2012; Hiebert et al., 2019).

Reading Comprehension

Reading comprehension is defined as the process of constructing meaning by integrating one's prior knowledge with the information in the text to arrive at a meaningful interpretation (NIL 2007; Samuels 2006). It is definitely not a simple process. Grantham et al. (2022, 1) describes reading comprehension as "a multifaceted, dynamic, and interactive process that involves characteristics of the reader and the text that is situated within a larger sociocultural context

that interacts with both textual and extra-textual information, such as background knowledge and experience."

At the intermediate and secondary levels, content, style, syntax, topics, and text structure contribute to difficulties of text comprehension (NIL 2007; Samuels 2006). Even collegiate learners, whose ages still fall within the definition of adolescence, find it hard to comprehend text and answer questions that require inferential and interpretative comprehension—particularly (and surprisingly) when the text is a narrative (Yanilla Aquino 2021). Many high school and intermediate students will encounter all these variables that make reading comprehension difficult as they get to read different types of texts with varying genres and level of difficulty (Dray et al. 2019). For example, unfamiliarity with expository text structures and a lack of appropriate skills to interrogate these texts contribute to reading difficulties (Duke & Roberts 2010). The complex nature of reading comprehension makes it challenging to construct and interpret assessments.

Writing

Writing, just like reading, is a process that cuts across the curriculum. Improving writing skills leads to an increased capacity to learn (Butvilofsky et al. 2020; NIL 2007). Student use writing as a means to communicate what they have read, listened to, and comprehended. It allows them to think about the text, organize their thoughts, and pay attention to details. Experts identify critical writing skills needed to write about complex academic texts in English as significant twenty-first century skills (Gándara, and Escamilla 2016; Olson, Scarcela, and Matuchnak 2015).

The connection between reading and writing has been demonstrated extensively in research across grade levels. Many of the skills required in writing are similar to reading, such as grammatical, vocabulary, and semantic skills (NIL 2007). Shanahan (2006) pointed out that reading and writing serve as basis for learning in the content areas, where students have to write on topics related to various genres and materials they are required to read.

Since the reading-writing connection has been clearly established in different empirical studies that test various kinds of alternative assessments (Gioia et al. 2023), it is clear that writing plays an important role in the assessment of literacy competence. Writing is a tool that can support reading comprehension development and content knowledge improvement, making its inclusion in assessment quite significant.

For multilingual beginning readers, writing assessments can be used to understand biliteracy development (Butvilofsky et al. 2020; Hopewell 2011). For adolescent readers, writing can be used to assess content knowledge, core academic skills, and English language literacies (Olsen et al. 2015; NIL 2007).

Vocabulary Knowledge

Word knowledge by itself is a process that includes word analysis, syntactic awareness, and pragmatic awareness (Afflerbach 2017; NIL 2007). Unlike decoding, which can be mastered at a certain stage, vocabulary knowledge is an open-ended process that predicts reading comprehension at each key stage of literacy development (Singer 2004). A lack of or limited understanding of the meaning and use of words will lead to comprehension gaps (Spencer, Quinn, and Wagner 2014; Perfetti and Stafura 2014; Allington 2014). On the other hand, extensive vocabulary benefits readers in many ways. Studies show that, aside from facilitating word integration and indices of lexical access, vocabulary knowledge also facilitates silent reading performance and comprehension monitoring of elementary and high school students (Biseko 2023; Spichtig et al. 2022; Guerra and Kronmüller 2020; Hiebert et al. 2019; Hayden, Hiebert, and Trainin 2019). This implies that an expansive academic vocabulary positively affects comprehension and silent reading performance. In contrast, the probable consequences of low vocabulary include a decline in reading stamina and a lack of interest in monitoring reading comprehension, because a vocabulary deficit does not inspire extended reading (Ucceli et al. 2015; Nagy et al. 2006, 134).

Furthermore, among second and foreign language learners, the depth and breadth of vocabulary knowledge strongly predict textual comprehension in the second language (Dagnaw 2023; Nagy and Townsend 2012). Between the two, the explanatory power for vocabulary breadth is stronger and unique. This means that the students' knowledge of spoken and written words, word associations, word concepts, referents, grammatical functions, collocations, and constraints affects their textual comprehension.

Content Literacies

Grades 4 to 12 are predominantly focused on content literacy learning, which is further categorized into general content area literacy and disciplinary content area literacy. Since Grade 4 marks the start of content area reading, the focus is on the developing general comprehension skills that intermediate students need to read across the curriculum (Shanahan and Shanahan 2008; Fisher and Frey 2015). In high school, students are expected to acquire discipline-specific literacies that they need to be able to participate in different disciplines (Dray et al. 2019; Siebert et al. 2016).

Content area reading complicates reading comprehension and writing among adolescent learners. They must read and learn specialized vocabulary, understand content-specific language, and acquire the appropriate thinking skills for the different disciplines (Armstrong, Ming, and Helf 2018; RAND Reading Study Group 2002). Given the extent and the demands for new comprehension skills required in the content areas, assessments should address the content literacy needs of adolescent learners (Hiebert et al. 2019; Fisher and Frey 2015; Curwen et al. 2010). Drawing from this, Dray et al. (2019, 3) suggest that "assessments should define an underlying construct of comprehension, map out its development, and outline its composite skills so that a teacher can guide a student along a trajectory of learning."

Language Knowledge and Proficiency

Literacy experts contend that reading comprehension is not a separate process that can only be associated with written materials, as it is a process applicable to both written and oral forms (Yang 2021; Russel 2013). The linguistic view of reading posits that reading is "the construction and reconstruction of a spoken message or some internal representation of it" (Carroll, [2010] in Russel 2013, 3). Therefore, reading, as a linguistically-based process entails the use of processes that require language comprehension skills (Ruddell and Unrau 2013; Grabe 2009).

Even among monolingual readers, language skills are some of the main predictors of reading comprehension in the intermediate and high school levels (Uccelli et al. 2015; Fillmore and Fillmore 2012). Collins et al. (2021) concluded that, regardless of response formats and text types, students

with low or emerging language knowledge demonstrated the same level of proficiency on reading comprehension assessments. According to Kintsch (1988, 163) L2 reading is a complex process consisting of lower-level linguistic construction and higher-level semantic integration. Among L2 adolescent learners, lower-level processes may still pose difficulty in reading, especially when they interfere with higher order processes.

Academic Language

In addition to vocabulary knowledge, schema, and text-processing strategies, discipline-specific language skills are said to be better predictors of reading comprehension in the content areas (Uccelli et al. 2015). This is true not only with English as a second language (ESL) learners but also for monolingual English learners. This is because language use in the academe is context-dependent (Dolosic 2018). Hence, it is suggested that there should be a close alignment between the language skills being assessed and those required for successful academic reading.

TYPES OF ASSESSMENT

Assessment should provide opportunities for students to learn and reflect on using different literacy skills (Childress et al. 2019; Briceño and Klein 2018). Formative assessments, in particular, can inform us about how our students are learning and what they are learning while they are learning. On the other hand, summative tests can give us a bigger picture of where our students are in terms of the progress they are making (Afflerbach 2017). These classroombased assessments have more potential to inform the direction of literacy instruction compared to standardized tests (ILA 2018; Toyama, Hiebert, and Pearson 2017; Kontovourki 2012). While the latter can help identify how students are performing based on grade-level standards, redesigning instruction based on standardized tests results alone may be problematic (Dennis 2009). First, they do not provide specific information about students' strengths and limitations (Dray et al. 2019; Toyama, Hiebert, and Pearsons 2012; Rupp and Lesaux 2006). Second, results from standardized tests often categorize students based on levels of skills usage (Buly and Valencia 2002). Because of this, ensuing instruction may overemphasize the teaching of basic literacy skills (Childress et al. 2019; Toyama, Hiebert, and Pearson 2017).

Afflerbach (2005) pointed out that standardized test results are not good indicators of literacy growth, as they may only provide an approximation of the students' actual achievement level, whereas effective classroom-based assessments provide feedback that can clarify and understand learning goals (William and Thompson 2007). General background knowledge, abilities, and cultural background affect assessment performance (Butvilofsky et al. 2020; Coombe et al. 2020; Dagostino et al. 2013). Viewing assessment as something based on a general idea of a target proficiency or standards overlooks the differences in abilities and needs among learners (Childress et al. 2019).

TESTING METHODS

According to Alderson (2000), a reliable assessment is one that incorporates a variety of methods. This ensures a comprehensive and statistically-reliable evaluation of individual student's reading abilities. Several studies have reported that, when it comes to assessment of literacy skills such as reading comprehension, no single response format can yield accurate results (Liao 2021; Collins et al. 2021; Dolosic 2018). Additionally, the process of selecting testing methods must include determining which skills to evaluate and how to conduct test-item analysis. However, studies exploring the latter are uncommon. Coggins, Kim, and Briggs (2017) found out that employing item response theory (IRT) in analyzing test results can provide more precise and detailed item-level information, helping to identify test items and response formats suitable for learners' individual abilities.

Moreover, the changing nature of literacy learning means that assessment should not be treated as a one-size-fits-all phenomenon. The addition of new literacies demands that new approaches to assessment must be explored (Wyatt-Smith and Kimber 2009), as multimodal learning requires new methods and new tools for providing feedback and defining success criteria (Yeatman et al. 2021; Cloonan et al. 2016).

TYPES OF TEXTS

Several studies have reported that genres of text cause differences in reading comprehension performance (Chiu 2007; Duke and Roberts 2010; Yanilla Aquino 2021). Although it is widely acknowledged that using varied types and genres of texts would benefit assessment, there is little understanding of the implications of text structure in second language reading (Dolosic 2018; Cloonan et al. 2016). The presence of cultural conventions in texts is predictive of assessment performance. Familiarity with and experience in the language of the text facilitate processing capacity, thereby reducing difficulties in dealing with cultural conventions in the text (Chu, Swaffar, and Charney 2002).

RECURRING "THEMES" IN THE REVIEW OF LITERATURE

In summary, all aspects, components, and factors discussed above may collectively or individually predict the literacy performance of multilingual adolescent learners. The following section discusses the themes and patterns drawn from the literature review.

A review of studies on literacy assessment yielded several recurring themes, some of which are implied by the results of the studies themselves. In developing a theoretical framework for the multiliteracy assessment of multilingual learners, three themes are echoed in the studies: (1) the need to determine the profile of the target learners, (2) the need to define literacy assessment for adolescent multilingual learners, and (3) the need to identify the qualities of multiliteracy assessment.

THE GRADE 4 TO 12 STUDENTS: A PROFILE

Filipino students in Grades 4 to 12 usually range in age from 9 to 19 years old. Because they know at least two languages—the one that they speak at home (mother tongue or L1) and the one they learn in school (their second language or L2)—and because they have had at least four years of formal schooling, they are usually somewhat literate in at least one language (usually their L1) and may also be literate in two (their L1 and L2). These students come from

varied cultural and socio-economic backgrounds, which can pose a challenge in designing a multiliteracy assessment tool for them. The tool must account for these differences in background.

In terms of required literacy skills, this group transitions into more difficult content-area reading. As discussed in the literature review, their levels of competency vary a lot, and it is possible that some may not yet be fluent readers, even in their L1. One insight from the literature review is that literacy itself is a socio-cultural activity that occurs in a specific context. Since the learners come from different contexts, those who design the literacy assessment tools must ensure that no particular group of learners is given an undue advantage due to the tool favoring a specific cultural or socio-economic background.

DEFINING MULTILITERACY ASSESSMENT

There is a need to provide an operational definition of multiliteracy assessment to guide the people who will design the assessment tools. The review of literature showed that both the terms "multiliteracy" and "assessment" can be defined differently depending on the purpose or objectives of the study. Thus, an operational definition can help clarify the scope and limitations of the term. For instance, would assessment be confined to the four macro-skills (reading, writing, listening, speaking) or would it also involve other types of literacy, such as visual and digital literacies?

Moreover, it is important to decide on the main purpose of the assessment tools (e.g. appraise achievement) and the ways by which relevant information regarding the literacy of Grade 4 to 12 students will be collected, measured, analyzed, synthesized, and interpreted. It is also crucial to identify the predictors (which have been identified in the review of literature) of literacy among this group of learners and determine if the predictors remain the same even when this group of learners is divided into subgroups based on age or grade level. Likewise, it is important to set the specific standards or criteria that will serve as evidence of achievement for each predictor.

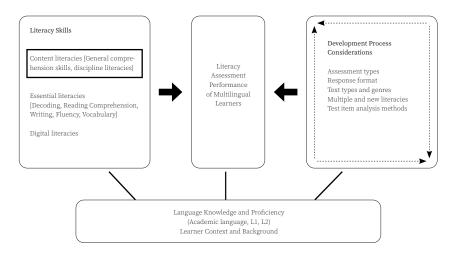
QUALITIES OF MULTILITERACY ASSESSMENT: WHAT CONSTITUTES A GOOD MULTILITERACY ASSESSMENT?

The review of related literature points to some common qualities among the assessment tools: holistic (able to measure knowledge, values, and macro skills—thus covering both cognitive and affective aspects of literacy learning); multilingual (including the learners' mother tongue, as well as the other two languages used as mediums of instruction in schools—Filipino and English); contextualized, authentic, and balanced; inclusive and multimodal; traditional and nontraditional (alternative methods); able to identify both the literacy strengths and weaknesses of learners; uses varied genres of texts and nontexts; multi-level in terms of hierarchy and utilizing both top-down (from policy makers to classroom teachers) and bottom-up (from classroom teachers to policymakers) processes; identifies valued learning outcomes; and includes both formative and summative assessments—of learning and for learning.

PROPOSED FRAMEWORK FOR MULTILITERACY ASSESSMENT OF MULTILINGUAL ADOLESCENT LEARNERS

Based on the recurring themes presented earlier, multiliteracy assessment for multilingual learners should consider a number of factors and conditions affecting literacy assessment performance. Figure 1 presents these and shows the interaction between and among these elements.

Foremost among these considerations are the literacy skills to be assessed. Successful learning requires knowledge of using several literacy skills simultaneously. Through multiliteracy assessment, we can identify the specific literacy skills that our multilingual adolescent learners are already adept at and those that they are struggling with. Boxing the content literacy skills indicates that these should be the main focus of assessment, as they are the immediate needs of adolescent learners. Content learning requires the efficient use of literacy skills, such as reading and writing. However, the essential literacies, being prerequisites for effective content learning, should also be highlighted, especially in formative assessments.



■ Figure 1. Framework for Multiliteracy Assessment of Multilingual Adolescent Learners

The framework shows, through the broken arrows, that assessment types, methods, text types and genres, and the changing mode of literacy learning interact between and among each other. Consequently, this interaction influence literacy assessment performance. This implies that in the development process, careful and thoughtful planning is needed to ensure the following:

- Appropriate response formats must be identified. Not only do different literacy skills require different assessment processes, but the complexities and relevance of each literacy skill demand more than one response format.
- Many adolescents of the present generation have acquired new literacies because of the advent of computer mediated communication. Traditional assessments may miss evaluating or may misevaluate these new skills. This calls for rethinking the development process of literacy assessments, as well as the tools to be used.
- While standardized tests provide general information about the learners' literacy skills and abilities, it is the use, selection, and development of classroom-based assessments that should be highlighted. The information that the latter can provide is more precise in designing a responsive literacy instruction.

- Multiliteracy assessment calls for test item analysis that will not only evaluate level of difficulty or inappropriateness of test items, but can also provide information on the level of competence that literacy learners possess.
- There are many factors to consider in choosing text types and genres to use for literacy assessment. These include (1) using both language-based and representational texts; (2) alignment between the text types and genres and the skills to be measured; (3) language comprehension skills of the learners; (4) background of the learners; and (5) reading comprehension skills of the learners.

Lastly, the framework emphasizes the centrality of language knowledge and proficiency, as well as learner context and background, in literacy assessment for adolescent learners. As shown in the diagram, they are connected to all the components. This means that these two factors interact either directly or indirectly with assessment factors and what readers bring to the assessment process. For instance, no multilingual/bilingual adolescent possesses the same level of language comprehension skills in their first and second languages. Hence, their literacy assessment performance may be the result of the level of their language comprehension skills rather than their literacy skills. Second or foreign language proficiency could be a more reliable predictor of literacy skills among ESL and EFL learners. Consequently, language competency can be used as a basis for categorizing multilingual adolescents' learners in terms of literacy assessment performance. On the other hand, adolescents' background and context may determine their response to types of texts, response formats, types of literacy assessment, and literacy skills being assessed. These emphasizes that assessments for these learners have to be sensitive and cognizant of diversities in their culture and experiences.

In summary, the framework posits that a multiliteracy assessment that emphasizes the role of language proficiency and knowledge, and recognizes what adolescent learners bring, may truly inform the direction of literacy instruction.

CONCLUSIONS AND RECOMMENDATIONS

Designing literacy assessments that truly guide the direction of any literacy instruction for multilingual adolescents require thoughtful consideration of the subprocesses involved and the factors and conditions relevant to the learners. For one, the development of a theoretical framework for the multiliteracy assessment of Grade 4 to 12 multilingual learners must take into consideration at least three important things: the profile and background of the students, the operational and contextualized definition of literacy assessment, and the qualities of a multiliteracy assessment. Although it must involve both bottom-up (i.e., the teachers in the classroom) and top-down (i.e., policymakers and institutions) processes, emphasis must be on the former to ensure that it will be more authentic and based on the actual needs and experiences of the learners.

One very significant conclusion derived from this paper pertains to the role of bilingual competence in literacy assessment performance. Bilingual competence strongly and consistently influences literacy assessment outcomes among multilingual adolescent learners. It is, therefore, suggested that we rethink our view of framing assessments through a monolingual lens. Multilingual adolescents always rely on their linguistic resources when using literacies to learn about anything. If using both languages gives them an advantage in producing knowledge, they should also be provided with the same choice during assessments.

Finally, this study posits that adolescent literacy assessments should reflect the multifaceted nature of literacy. Although literacy characteristics change at each key stage, the nature of literacy learning remains complex all throughout. Adolescents can only become functionally literate when they can decode expertly, comprehend proficiently, read fluently, use general comprehension skills to read different content, and employ appropriate discipline literacies when reading. Adolescent educators must integrate all of these elements in assessment.

REFERENCES

- Afflerbach, Peter. 2005. "National Reading Conference Policy Brief: High Stakes Testing and Reading Assessment." *Journal of Literacy Research* 37 (2): 151–62. London, Sage Publishing. https://doi.org/10.1207/s15548430jlr3702_2
- Afflerbach, Peter. 2017. Understanding and Using Reading Assessment, K–12 (3rd ed.). Alexandria, VA: ASCD.
- Alderson, Charles. 2000. Assessing Reading. Cambridge, UK: Cambridge University Press.
- Allington, Richard. 2014. "How Reading Volume Affects Both Reading Fluency and Reading Achievement." *International Electronic Journal of Elementary Education* 7 (1): 13–26. Retrieved from https://files.eric.ed.gov/fullt ext/EJ105 3794.pdf
- Armstrong, Abbigail, Kavin Ming and Shawna Helf 2018. "Content Area Literacy in the Mathematics Classroom." *The Clearing House* 91 (2): 85–95. https://doi.org/10.1080/00098655.2017.1411131
- Babayigit, Selma. 2014. "The Role of Oral Language Skills in Reading and Listening Comprehension of Text: A comparison of monolingual and bilingual speakers of English language." *Journal of Research in Reading* 37 (1): 22–47. https://doi.org/10.1111/j.1467-9817.2012.01538.x
- Benjamin, Rebekah and Paula Schwanenflugel. 2010. "Text Complexity and Oral reading Prosody in Young Readers." *Reading Research Quarterly* 22 (4): 388–404.
- Biseko, John Misana. 2023. "Vocabulary size and Comprehension of Academic Texts by University Students: An Exploratory Study." Southern African Linguistics and Applied Language Studies 41 (4): 496–513.
- Briceño, Allison and Adria Klein. 2018. "A Second Lens on Formative Reading Assessment with Multilingual Students." *The Reading Teacher* 72 (5):611–23. https://www.jstor.org/stable/26801655
- Buly, Marsha Riddle and Shiela Valencia. 2002. "Below the Bar: Profiles of Students Who Fail State Reading Assessments." Educational Evaluation and Policy Analysis 24 (3): 219–39. https://doi.org/10.3102/01623737024003219
- Butvilofsky, Sandra Escamilla, Kathy Adrianna, Deena Gumina, and Elizabeth Elozabeth.2020.

 "Beyond Monolingual Reading Assessments for Emergent Bilingual Learners

 Expanding the Understanding of Biliteracy Assessment Through Writing." Reading

 Research Quarterly 56 (1): 53–70. https://doi.org/10.1002/rrq.292

- Childress, Jennifer, Alyssia Cella Backman, and Marjorie Lipson. 2019. "Reframing Literacy Assessment: Using Scales and Micro-Progressions to Provide Equitable Assessments for All Learners." *Journal of Adolescent and Adult Literacy* 63 (4): 371–77. https://www.jstor.org/stable/48556028
- Chiu, Menelea. 2007. "Orchestration of Reading and Writing Activities and Response Journal Outputs." Unpublished Doctoral Dissertation. University of the Philippines, Quezon City.
- Chu, Hsi-Chin Janet, Janet Swaffar, and Dabvida Charney. 2002. "Cultural Representations of Rhetorical Conventions: The Effects on Reading Recall." *TESOL Quarterly* 36 (4): 511–41 https://doi.org/10.2307/3588239
- Cloonan, Anne, Kirsten Hutchison, and Louise Paatsch. 2016. "Renewing Assessment

 Practices: Literacy Teaching and Learning in Digital Environment." *The International Journal of Assessment & Evaluation* 23 (4): 12–28. https://doi.org/10.18848/2327-7920/CGP/v23i04/13-28
- Coggins, Joanne. Jwa Kim, and Laura Briggs. 2017. "Comparison of IRT and CTT Using Secondary Reading Comprehension Assessment." *Research in the Schools* 24 (1): 80–93. Haughton: MISERA.
- Collins, Allyson, Esther Lindstrom, and Michael Sandbank. 2021. "The Influence of Language Knowledge and Test Components on Reading Comprehension Scores." *Annals of Dyslexia* 71: 238–59. https://doi.org/10.1007//s1181-020-00212-y
- Coombe, Christine, Hossein Vafadar, and Hassan Mohebbi, 2020. "Language Assessment: What Do We Learn, Unlearn, and Relearn?" *Springer Open* 10 (3): 1–17. https://languagetestingasia.springeropen.com/articles/10.1186/s40468-020-00101-6
- Curwen, Margaret, Roxanne Miller, Kimberly White-Smith, and Robert Calfee. 2010.

 "Increasing Teachers' Metacognition Develops Students' Higher Learning During
 Content Area Literacy Instruction: Findings Form the Read-Write Cycle Project."

 Issues in Teacher Education 19 (2): 127–46. https://files.eric.ed.gov/fulltext/EJ902679.pdf
- Dagnaw, Animut Tadele. 2023. "Revisiting the Role of Breadth and Depth of Vocabulary

 Knowledge in Reading Comprehension." *Cogent Education* 10: 2217345. https://doi.org/1
 0.1080/2331186X.2023.2217345
- Dagostino, Lorraine, James Carifio, Jennifer Bauer, and Qing Zhao. 2013. "Cross-cultural Reading Comprehension Assessment in Malay as it Relates to the Dagostino-Carifio Model of Reading Comprehension." *Current Issues in Education* 16 (1): 1–15 https://cie.asu.edu/ojs/index.php/cieatasu/article/view/1063

- Dennis, Danielle. 2009. "I'm not stupid': How Assessment Drives (in) Appropriate Reading Instruction." *Journal of Adolescent and Adult Learners* 53 (4): 283–90. https://www.jstor.org/stable/30250069
- Dolosic, Haley. 2018. "An Examination of Self-Assessment and Interconnected Facets o Second Language Reading." *Reading in a Foreign Language* 30 (2): 189–208. Http://nflrc.hawaii.edu/rfl.
- Dray, Amy, Nathaniel Brown, Ronli Diakow, Yongsang Lee, and Mark Wilson. 2019. "A

 Construct Modelling Approach to the Assessment of Reading Comprehension for

 Adolescent Readers." *Reading Psychology* (40): 191–241. https://doi.org/10.1080/02702711
 .2019.1614125
- Duke, Nell and Roberts, Kathryn. 2010. "The Genre -Specific Nature of Reading Comprehension." In *The Routledge International Handbook of English, language, and literacy*, 75–86. New York and London: Routledge.
- Fillmore, Lily Wong and Fillmore, Charles J. 2012. "What Does Text Complexity Mean for English Learners and Language Minority Students?" Paper Presented at the Understanding Language Conference, Stanford, CA.
- Fisher, Douglas and Frey, Nancy. 2015. "Revisiting Content Area Literacy Instruction." *Principal Leadership* 15 (6), 54–7. USA: National Association of Secondary Principals.
- Gándara, Patricia and Escamilla, Kathy. 2016. "Bilingual Education in the United States." In Bilingual and Multilingual Education (3rd ed.), edited by Ofelia Garcia, Angel Lin, and Stephen May. Cham, Switzerland: Springer.
- Grant, Maria and Booth, Andres. 2009. "A Typology of Reviews: An Analysis of 14 Review
 Types and Associated Methodologies." *Health Information & Libraries Journal* (26): 91–
 108. https://doi.org/10.1111/j.1471-1842.2009.00848.x
- Gillet, Jean Wallace, Charles Temple, and Alan Crawford, 2012. *Understanding Reading Problems: Assessment and Instruction* (8th ed.). Pearson, Boston.
- Gioia, Anthony, Yusra Ahmed, Steven Woods, and Paul Cirino. 2023. "Properties of Combined Measure of Reading and Writing: The Assessment of Writing, Self Monitoring, and Reading (AWSM Reader)." Reading and Writing 36:723–44. https://doi.org/10.1007/s11145-022-10274-6
- Grabe, William. 2009. Reading in a Second Language: Moving From Theory to Practice.

 Cambridge, UK: Cambridge University Press.

- Grantham, Tauylor, Matthew Carter, Crystal Randolph, and Gina Doepker, G. 2022.

 "Predictive Values of Factors Affecting Reading Comprehension Assessment." *Literacy Practice and Research* 47 (4): 1–21. https://digitalcommons.fiu.edu/lpr/vol47/iss4/2
- Guerra, Ernesto and Kronmüller, Edmundo. 2020. "Adult Vocabulary Modulates Speed of Word Integration into Preceding Text Across Sentence Boundaries: Evidence From Self-Paced Reading." Reading Research Quarterly, 55 (4): 663–77. https://doi.org/10.1002/rrq.290
- Hayden, Emily, Elfrieda Hiebert, and Guy Trainin. 2019. "Patterns of Silent rRading Rate and Comprehension as a Function of Developmental Status, Genre, and Text Position."
 Reading Psychology, 40(8), 731–767. Taylor and Francis Online.
 https://doi.org/10.1080/02702 711.2019.1673602
- Helman, Lori. 2016. Literacy development with English learners:Research-Based Instruction in Grades K–6 (2nd ed.). New York, NY: Guilford.
- Hiebert, Elfrieda, Judith Scott, Ruben Castaneda, and Alexandra Spichtig. 2019. "An Analysis of the Features of Words that Influence Vocabulary Difficulty." Education Sciences, 9 (1), 8. USA: MDPI. https://doi.org/10.3390/educs ci901 0008
- Hopewell, Susan. 2011. "Leveraging Bilingualism to Accelerate English Reading Comprehension." International Journal of Bilingual Education and Bilingualism, 14(5), 603–620. Taylor and Francis online. https://doi.org/10.1080/13670 050.20 11.564274.
- Hostetler, Kirsten, Tian Luo, and Jill Stefaniak. 2018. "Aligning Information Literacy
 Assessment with Metacognitive Strategies. "Journal of University Teaching and
 Learning Practice, 15 (5), pp 1-14. Wollongong: Stems Faculty Publication.
- International Literacy Association. (2016). Why Literacy? Retrieved from https://www.literacyworldwide.org/about-us/why-literacy.
- ---. (2018). Standards for the preparation of literacy professionals 2017. Newark, DE.
- ——. (2020). "Making Sense of Elementary School Reading Scores." Literacy Leadership Brief. Newark, DE.
- Kintsch, Walter. 1988. "The Role of Knowledge in Discourse Comprehension: A Construction— Integration Model." Psychological Review, 95(2), 163–182. https://www.sciencedirect com/science/article/abs/pii/S0166411508615514?via%3Dihub https://doi.org/10.1037/0033-295X.95.2.163

- Kontovourki, Stavroula. 2012. "Reading Leveled Books in Assessment-Saturated Classrooms:

 A Close Examination of Unmarked Processes. "Reading Research Quarterly, 47(2),
 153–171. DE: International Literacy Association. doi:10.1002/RRQ.014.
- Kuhn, Melanie and Schwanenflugel, Paula. 2019. "Prosody, Pacing, and Situational Fuency (or Why fFuency Matters for Older Readers. "Journal of Adolescent and Adult Learners, 62 (4), pp. 363-368. DE: International Literacy Association.
- Kuhn, Melanie, Paula Schwanenflugel, and Elizabeth Meisinger, 2010. "Aligning Theory and Assessment of Reading Fuency: Automaticity, Prosody, and Definitions of Fluency."

 Reading Research Quarterly, 45 (2). Pp. 230-251. DE: International Literacy Association.
- Lemhöfer, Kristin, Ton Dijkstra, Herbert Schriefers, Harald Baayen, and Jonathan Grainger. 2008. "Native Language Influences on Word Recognition in a Second Language: A Megastudy." Journal of Experimental Psychology, 34 (1), 12-31. PubMed Online.
- Lewis, Kayla. (2018). "Lessons Learned: Applying Principles of Reading Recovery in the Classroom." The Reading Teacher, 71(6), 727–734. NE: International Literacy Association. https://doi.org/10.1002/trtr.1663.
- Liao, Ray. 2021. "Exploring Task-Completion Processes in L2 Reading Assessments: Multiple Choice vs. Short-Answer Questions." Reading in a Foreign Language, 33 (2), 168-190. Hawaii: National Foreign Resource Center.
- McCrudden. M. & Schraw, G. (2010). "The Effects of Relevance Instructions and Verbal Ability on Text Processing." The Journal of Experimental Education, 78, 96-117.
- Macinnis, Deborah. (2011). "A Framework of Conceptual Contributions in Marketing."

 Journal of Marketing, 75 (4). USA: American Marketing Association.
- Miller, Justin and Schwanenflugel, Paula. 2008. "A Longitudinal Study of Reading Prosody as a Dimension of Oral Reading Fluency in Early Elementary School Children." Reading Research Quarterly, 43 (4), 336-354. NE: International Literacy Association.
- Mokibelo, Eureka. 2018. "Using Portfolio Assessment at Lower Secondary Education in Setswana Language Lessons." Journal of Language Teaching and Research, 9 (5), pp. 1059-1066. ResearchGate Online. Doi: http://dx.doi.org/10.17507/jltr.0905.21.
- Moore, David, Thomas Bean, Deanna Birdyshaw, and James Rycik. 1999. Adolescent Literacy: A Position Statement. Newark, DE: International Reading Association.

- Nagy, William, Virgina Berninger, and Robert Abbott. 2006. Contributions of Morphology Phonology to Literacy Outcomes of Upper Elementary and Middle School Students. Journal of Educational Psychology, 98 (1), 134-137. USA: SCIRP.
- Nagy, William and Diana Townsend, D. (2012). "Words as Tools: Learning Academic Vocabulary as Language Acquisition." Reading Research Quarterly, 47 (1), 91–108. NE: International Literacy Association. doi: 10.1002/RRQ.011
- National Institute for Literacy. (2007). What Content-Area Teachers Should Know About Adolescent Literacy. National Institute of Child Health and Human Development (NICHD). 72 pages.
- Noguerón-Liu, Silvia. 2020. "Expanding the Knowledge Base in Literacy Instruction and Assessment: Biliteracy and Translanguaging Perspectives from Families, Communities, and Classrooms." Reading Research Quarterly
- Olson, Carol Booth, Robin Scarcella, and Tina Matuchniak. 2015. "English Learners, Writing, and the Common Core." The Elementary School Journal, 115(4), 570–592. USA: JSTOR. https://doi.org/10.1086/681235
- Quirk, Matthew and Sofie Beem, S. (2012). "Examining the Relationships Between Reading Fluency and Reading Comprehension for English Language Learners." Psychology in the Schools 49 (6). 539-555. Wiley Online.
- Perfetti, Charles and Joseph Stafura. 2014). "Word Knowledge in a Theory of Reading Comprehension." Scientific Studies of Reading, 18(1), 22–37. Pennsylvania: University of Pittsburg https://doi.org/10.1080/10888438.2013.827687
- Perfetti, Charles and Hart, Lesley. 2001. "The Lexical Basis of Comprehension Skill." In David. Gorfien (ed). On the consequences of meaning selection: Perspectives on solving lexical ambiguity, pp. 67-86. USA: American Psychological Association.
- RAND Reading Study Group. (2002). "Reading for Understanding: Toward an R & D Program in Reading Comprehension." Santa Monica, CA: RAND Education.
- Rasinski, Timothy. 2006. "Reading Fluency Instruction: Moving Beyond Accuracy,
 Automaticity, and Prosody." The Reading Teacher, 56 (7), 704-706. NE: International
 Literacy Association.
- Rasinski, Timothy, Andrew Rikli, and Susan Johnston, S. (2009). "Reading Fluency: More Than Automaticity? More Than a Concern for the Primary Grades? Literacy Research and Instruction, 48 (4), 350-361. NE: International Literacy Association.

- Rasinski, Timothy. Shi-Ching Chang, Elizabeth Edmonson, James Nagildinegr, Jennifer Nigh, Linda Remark, Kirsten Kenney et al. 2016. "Reading Fluency and College Readiness." Journal of Adolescent and Adult Literacy, 60 (4), pp. 453-460. NE: International Literacy Association.
- Reed, Deborah, Nathan Stevenson, and Brandon LeBeau. 2019. "The Effects of Reading the Items Aloud Before or After Reading the Passage." The Elementary School Journal, 120 (2), 300-320. Chicago: University of Chicago Press.
- Reoperez, Marie Grace. (2018). "Exploring the Relationship Between Fluency and Comprehension Among Filipino Bilingual Adolescent Readers." Unpublished journal article. Quezon City: University of the Philippines Diliman.
- Risko, Victoria and Doris Walker-Dalhouse. 2010). "Making the Most of Assessments to Inform Instruction." The Reading Teacher, 63 (5), pp. 420-422. NE: International Reading Association.
- Ruddell, Robert and Unrau, Norman. (2013). "Reading as a Meaning Construction Processes:

 The Reader, the Text, and the Teacher." In Robert Ruddell and Norman Unrau (Eds).

 Theoretical Models and Processes of Reading (4th ed). (pp. 1015-1068). Newark, DE:
 International Reading Association.
- Rupp, Andre and Nonie Lesaux. 2006. "Meeting Expectations? An Empirical Investigation of a Standards-Based Assessment of Reading Comprehension." Educational Evaluation and Policy Analysis, 28(4), 315–333. doi:10.3102/01623737028004315
- Russel, Christopher. (2013). "Four Decades of Formal Reading Inventories." Review of Higher Education and Self- Learning (6) 22, pp.1-21.
- Samuels, Jay. 2013. "Toward a Theory of Automatic Information Processing in Reading, Revisited." In Robert Ruddell, Norman Unrau, and Henry Singer (Eds.). Theoretical Models and Processes in Reading, 6th ed. (pp. 698-718). Newark, DE: International Reading Association.
- Samuels, Jay. 2006. "Toward a Model of Reading Fluency." In S.J. Samuels & A.E. Farstrup (Eds.). What Research Has to Say About Fluency Instruction. (pp. 25-46). Newark, DE: International Reading Association.
- Schroeder, Sascha 2011. "What Readers Have and Do: Effects of Students' Verbal Ability and Reading Time Components on Comprehension with and Without Text Availability." Journal of Educational Psychology, 103 (4), 877-896. USA: SCIRP.

- Shanahan, Cynthia and Timothy Shanahan. 2008. "Teaching Disciplinary Literacy to Adolescents: Rethinking Content-Area Literacy." Harvard Educational Review. 78(1), 40-59. Harvard: Harvard Education Press.
- Shanahan, Timothy. 2006. "Relations among Oral Language, Reading, and Writing Development." In Charles MacArthur, Steve Graham, and Jill Fitzgerald (Eds.), Handbook of Writing Research (pp. 171–183). New York: The Guilford Press.
- Siebert, Danile, Roni Draper, Jo Barney, Paul Broomhead, Sirpaum Grierson, Amy Jensen, Jennifer Nielson, Steven Nokes. 2016. Characteristics of Literacy Instruction that Support Reform in Content Area Alassroom. Journal of Adolescent and Adult Literacy, 60 (1), pp. 25-33. DE: International Literacy Association.
- Singer, Henry. 2004. "The Substrata-Factor Theory." In R.B. Ruddell, M.R. Ruddell, & H. Singer (Eds.). Theoretical Models and Processes in Reading, 4th ed. (pp. 895-927). Newark, DE: International Reading Association.
- Snyder, Hannah. 2019. "Literature Review as a Research Methodology: An Overview and Guidelines." Journal of Business Research 104, 333-339. Elsevier Online.
- Spencer, Mercedes, Jamie Quinn, and Richard Wagner. 2014. "Specific Reading Comprehension Disability: Major Problem, Myth, or Misnomer?" Learning Disabilities Research & Practice, 29(1), 3–9. Wiley Online Library.
- Spichtig, Alexandra, Jeffrey Pascoe, Kristin Gehsmann, Fei Gu, and John Ferrara. 2022. "The Interaction of Silent Reading Rate, Academic Vocabulary, and Reading Comprehension Among Students in Grades 2-12."Reading Research Quarterly 57 (3). Pp 1003-1019. NE: International Literacy Association.
- Taguchi, Etsau, Greta Gorsuch, and Evelyn Sasamoto. 2006. "Developing Second and Foreign Language Reading Fluency and Its Effect on Comprehension: A Missing Link." The Reading Matrix, 6 (2), 1-18.
- Tranfield, David, Davis Denyer, and Palminder Smart. 2003. "Towards a methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review." British Journal of Management, 14(3), 207–222. https://doi.org/10.1111/1467-8551.00375
- Toyama, Yukie, Elfrieda Hiebert, and David Pearson. 2017. "An Analysis of the Text Complexity of Leveled Passages in Four Popular Classroom Reading Assessments." Educational Assessment, 22 (3), pp. 139-170. Routledge Taylor & Francis Group.

- Uccelli, Paola, Emily Phillipis Galloway, Christopher Barr, Alejandra Meneses, Christina Dobbs. 2015. "Beyond Vocabulary: Exploring Cross-Disciplinary Academic-Language Proficiency and Its Association with Reading Comprehension." Reading Research Quarterly, 50 (3), pp. 337-356. International Literacy Association.
- Van Diepen, Mieke, Ludo Verhoeven, Cor Aarnoutse, and Ana Bosman. 2007. "Validation of the International Literacy Test." Written Language and Literacy 10 (1), 1-23. John Benjamins Publishing Company.
- Van Gelderen, Amos, Rob Schoonen, Reinoud Stoel, Kees Glopper, and Jan Hulstijn. 2007.

 "Development of Adolescent Reading Comprehension in Language 1 and Language 2:

 A Longitudinal Analysis of Constituent Components." Journal of Educational
 Psychology online. 99 (3), 477-491.
- William, Dylan and Thompson, Marnie. 2007. "Integrating Assessment with Learning: What Will it Take to Make it Work?" In Dwyer, Carol Ann. (ed), The Future of Assessment: Shaping Teaching and Learning, pages 53-82. Mahwah, NJ: Lawrence Erlbaum Associates.
- Witell, Lars., Hannah Snyder, Anders Gustafsson, Paul Fombell, and Per Kristensson. 2016. "Defining Service Information: A Review and Synthesis." Journal of Business Research, 69 (8). 2863-2872. ScienceDirect.Com.
- Wyatt-Smith, Claire and Kimber, Kay. (2009). "Working Multimodality: Challenges for Assessment." English Teaching Practice and Critique 8 (3), pp. 70-90. https://edlinked.soe.waikato.ac.nz/journal/view.php
- Yeatman, Jason, Kenny Ann Tang, Patrick Donnelly, Maya Yablonski, Mahalaksmi Ramamurthy, Iliana Karipidis, Sendy Caffarra, et al. 2021. "Rapid Online Assessment of Reading Ability." Scientific Reports, 11 (6396). https://www.nature.com/srep/.
- Yang, Shuyi. 2021. "Constructing Diagnostic Reading Assessment Instruments for Low-Level Chinese as Second Language Learners." Reading in a Foreign Language 33 (2), pp. 212237.
- Yanilla Lalaine Aquino, 2021. "The Reading-Writing Connection: The Literacy Strengths and Weaknesses of ESL Filipino College Students Based on Diagnostic Test Results".

 In Chong,

THE UP CIDS DISCUSSION PAPER SERIES

The UP CIDS Discussion Paper Series features preliminary researches that may be subject to further revisions and is circulated to elicit comments and suggestions for enrichment and refinement. They contain findings on issues that are aligned with the core agenda of the research programs under the University of the Philippines Center for Integrative and Development Studies (UP CIDS).

CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES

Established in 1985 by University of the Philippines (UP) President Edgardo J. Angara, the UP Center for Integrative and Development Studies (UP CIDS) is the policy research unit of the University that connects disciplines and scholars across the several units of the UP System. It is mandated to encourage collaborative and rigorous research addressing issues of national significance by supporting scholars and securing funding, enabling them to produce outputs and recommendations for public policy.

The UP CIDS currently has twelve research programs that are clustered under the areas of education and capacity building, development, and social, political, and cultural studies. It publishes policy briefs, monographs, webinar/conference/forum proceedings, and the Philippine Journal for Public Policy, all of which can be downloaded free from the UP CIDS website.

THE PROGRAM

The **Education Research Program (ERP)** conducts studies under three categories: Curriculum and Assessment; Instruction and Teacher Development and Governance; and Finance and School Improvement. It is based on its agenda, "Policy Investigations in Support of the Filipino Learner 2019-2024." To guide these investigations, ERP conducts research on disinformation studies and language and literacy, focusing specifically on multi-literacy assessments and text assessment. These projects are multi-year studies that use mixed methods, employing data derived from assessments and conversations with multiple stakeholders.

EDITORIAL BOARD

Rosalie Arcala Hall EDITOR-IN-CHIEF

Janus Isaac V. Nolasco DEPUTY EDITOR-IN-CHIEF

PROGRAM EDITORS

■ EDUCATION AND CAPACITY BUILDING CLUSTER

Dina S. Ocampo Lorina Y. Calingasan EDUCATION RESEARCH PROGRAM

Fernando dlC. Paragas PROGRAM ON HIGHER EDUCATION RESEARCH AND POLICY REFORM

Romylyn Metila Marlene Ferido ASSESSMENT, CURRICULUM, AND TECHNOLOGY RESEARCH PROGRAM

Ebinezer R. Florano
PROGRAM ON DATA SCIENCE FOR
PUBLIC POLICY

■ SOCIAL, POLITICAL, AND CULTURAL STUDIES CLUSTER

Rogelio Alicor L. Panao PROGRAM ON SOCIAL AND POLITICAL CHANGE

Darwin J. Absari
ISLAMIC STUDIES PROGRAM

Herman Joseph S. Kraft STRATEGIC STUDIES PROGRAM

Marie Aubrey J. Villaceran Frances Antoinette C. Cruz DECOLONIAL STUDIES PROGRAM

■ DEVELOPMENT CLUSTER

Annette O. Balaoing-Pelkmans
PROGRAM ON ESCAPING THE
MIDDLE-INCOME TRAP: CHAINS FOR CHANGE

Antoinette R. Raquiza Monica Santos POLITICAL ECONOMY PROGRAM

Eduardo C. Tadem Ma. Simeona M. Martinez PROGRAM ON ALTERNATIVE DEVELOPMENT

Leonila F. Dans Iris Thiele Isip-Tan PROGRAM ON HEALTH SYSTEMS DEVELOPMENT

■ NEW PROGRAMS

Maria Angeles O. Catelo FOOD SECURITY PROGRAM

Weena S. Gera URBAN STUDIES PROGRAM

Benjamin M. Vallejo, Jr. CONSERVATION AND BIODIVERSITY

Rosalie B. Arcala Hall LOCAL AND REGIONAL STUDIES NETWORK

EDITORIAL STAFF

Lakan Uhay D. Alegre
SENIOR EDITORIAL ASSOCIATE

Kristen Jaye de Guzman Leanne Claire SM. Bellen JUNIOR EDITORIAL ASSOCIATE Jheimeel P. Valencia
COPYEDITOR

Jose Ibarra C. Cunanan Jessie Feniquito Mikaela Anna Cheska D. Orlino LAYOUT ARTISTS

Get your policy papers published. Download open-access articles.

The Philippine Journal of Public Policy: Interdisciplinary Development Perspectives (PJPP), the annual peer-reviewed journal of the UP Center for Integrative and Development Studies (UP CIDS), welcomes submissions in the form of full-length policy-oriented manuscripts, book reviews, essays, and commentaries. The PJPP provides a multidisciplinary forum for examining contemporary social, cultural, economic, and political issues in the Philippines and elsewhere. Submissions are welcome year-around.

Get news and the latest publications.

Join our mailing list: bit.ly/signup_cids to get our publications delivered straight to your inbox! Also, you'll receive news of upcoming webinars and other updates.

We need your feedback.

Have our publications been useful? Tell us what you think: bit.ly/dearcids.



UNIVERSITY OF THE PHILIPPINES CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES

Lower Ground Floor, Ang Bahay ng Alumni, Magsaysay Avenue University of the Philippines Diliman, Quezon City 1101