

Child-centered assessment research and practice

Current issues

 **Yuko Goto Butler** | University of Pennsylvania

 <https://doi.org/10.1075/llt.62.02but>

 Available under a CC BY-NC-ND 4.0 license.

Pages 20–42 of

Early Language Education in Instructed Contexts: Current issues and empirical insights into teaching and learning languages in primary school

Edited by Stefanie Frisch and Karen Glaser

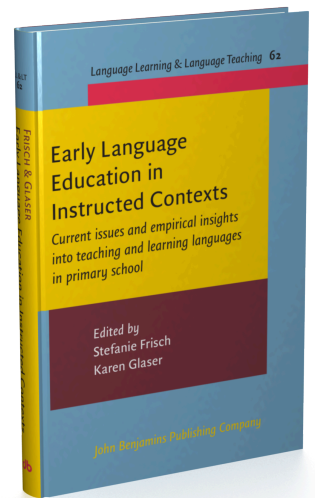
[*Language Learning & Language Teaching*, 62]

2025. xiv, 330 pp.

© John Benjamins Publishing Company

This electronic file may not be altered in any way. For any reuse of this material, beyond the permissions granted by the Open Access license, written permission should be obtained from the publishers or through the Copyright Clearance Center (for USA: www.copyright.com).

For further information, please contact rights@benjamins.nl or consult our website at benjamins.com/rights



Child-centered assessment research and practice

Current issues

Yuko Goto Butler
University of Pennsylvania

1. Introduction

As teaching additional languages to young learners (defined as children aged 5–12) in institutional settings has become increasingly popular globally, one of the concerns that has arisen among practitioners is how best to assess their language learning processes and outcomes. While various types of assessment have been used with young learners, they tend to be top-down and measurement-oriented. Any educator of young language learners can ask themselves questions such as “Do my students fully understand why they take the assessment?”, “Do I know how my students feel about and what they want from the assessment?”, “Have I discussed assessment criteria with the students?”, and “Have I ever designed an assessment together with my students?” and notice that such activities are not commonly practiced. Unfortunately, children are usually passively subjected to assessment, and their voices are rarely heard in the process of developing, implementing, and using assessments in reality. Similarly, language assessment research involving children largely has not taken their agency and voices seriously.

Meanwhile, in sociology, psychology, and other related fields concerning children and their development, *research with children* as opposed to *research on/about children* has been heatedly debated (Christensen & James, 2017). Children historically have been treated as objects of study (“research on children” such as children are given tasks or measurements in controlled settings) or as subjects of study (“research about children” such as children’s behaviors are observed and interpreted from adult perspectives). These approaches run the risk of underestimating children’s capacities and may miss opportunities to gain valuable insights from them. More importantly, in research on/about children, their rights may not be sufficiently respected and they may not directly benefit from participating in the study. Thus, these approaches have been challenged by ideas that promote

children's agency and grant them greater autonomy as social actors. In other words, more child-centered approaches to research are advocated (Pinter, 2022).

In line with this advocacy for research with children, this paper proposes greater child-centeredness in both assessment research and practice. It explores the idea of *child-centered assessment* in the context of early language education, specifically, language learning among children in instructional settings. The paper draws upon three lines of empirical work – children's assessment literacy self-assessment, and children's experience with digital technology in assessment – as examples of child-centered assessment. It discusses both potentials and challenges when taking child-centered approaches in assessment research and practice.

The notion of child-centeredness, although it has not been explicitly addressed in child language assessment literature, is not new in studies of general education; it has been discussed for centuries in education. Originating in the West, the concept of child-centered pedagogy has been understood in various ways and invited different interpretations (Tzuo et al., 2011). As discussed in detail below, child-centered pedagogy can mean age- or developmental appropriateness, but it can also refer to ideas of respecting children's autonomy and interests. In addition, child-centeredness may be associated with progressive education where dialogues and democratic relations between children and adults are emphasized. Child-centeredness also has been discussed in terms of protecting children's rights and listening to their voices (Ellis & Ibrahim, 2021; Pinter, 2023). No matter how child-centered pedagogy is understood, it essentially provides educators with opportunities to reflect on 'traditional' pedagogies and consider alternative approaches for meaningful learning for children. Given that assessment should be closely tied to pedagogy and instruction, one could argue that child-centered approaches should be more seriously considered in assessment as well. Unfortunately, current assessment practices are largely conducted in a top-down manner; teachers or other adult stakeholders make all the decisions throughout the assessment processes and there is little room for children to exercise their agency.

Below, the paper begins with background information concerning child-centered approaches in research and early childhood education in general. The paper also addresses *learner-centered* language teaching, which is predominantly discussed in the context of adult language learners. Such background discussions should be helpful for contemplating child-centered approaches in language assessment research and practices. Although child-centered assessment may not always work depending on the specific type of assessment desired, embracing methodological diversity when feasible can stimulate and advance our understanding of assessment research and practice.

2. Background

2.1 Child-centered approaches to research: Research with children

The idea of research with children arose out of dissatisfaction with the fact that child research has traditionally been conducted in a top-down manner and interpreted solely based on adult perspectives; children's voices were rarely heard and children served merely as the object or the subject of the study. Per contrast, in research with children, "children can be encouraged to contribute to adult-initiated research in active ways such as by suggesting alternative questions to explore, by evaluating draft research tools, by collecting data from their peers, and in some cases by taking charge of the whole of the research process as research assistants and researchers in their own right" (Kuchah & Pinter, 2021, p.13). As one can see from the above definition, research with children encompasses a range of children's active engagement in the research with various degrees and formats. The strongest form of research with children can also be referred to as "research *by* children" in which children undertake their research with adults' guidance.¹

Pinter (2023) argues that the premises of employing research with children include: (a) children's abilities are historically underestimated; (b) children's insights are valuable and worth listening to; (c) accumulated discussions on research with children in related disciplines should advance the field of applied linguistics (which has not yet paid sufficient attention to research with children) by increasing the awareness among researchers; and most of all, (d) children tend to enjoy and benefit from the processes of active participation in the research. Importantly, research with children should be considered as an alternative approach to research; it should serve as a complement to the traditional approach, not a replacement for it (Pinter, 2023). It is, indeed, fair to say that research with children appears to be more suitable for a certain type of research (e.g., participatory and/or action research) but may not work well in other types of research.

In the field of language assessment, this approach is rarely implemented. The lack of attention to research with children may partially reflect the top-down characteristic of many current assessment (research) practices. However, there seems to be sufficient room for assessment researchers to incorporate the basic idea of

1. For example, in Pinter (2019a), English-learning primary school children in the United Kingdom participated in a research project as an extra-curricular activity. After receiving initial instruction on how to conduct research, children identified research topics, formulated research questions, developed questionnaires, collected and analyzed the data, and reported the results.

research with children – namely, respecting child participants’ agency as social actors – even in cases in which direct implementation of research with children may be challenging. The same argument should be applied to assessment practice as well, given that assessment is part of learning and teaching cycles. The basic idea of research with children is indeed closely related to child-centered education.

2.2 Child-centered approaches in early childhood education

Child-centered education has been a popular concept since its coinage by Friedrich Froebel (1826/1989), who emphasized children’s natural curiosity and desire to learn as well as the role of play in early childhood education. Child-centered education generally refers to a pedagogical approach that emphasizes children’s autonomy and their ability to self-construct knowledge with the help of teachers and adults, rather than viewing children as mere consumers of information transmitted by teachers and adults.

However, in practice, child-centeredness has been conceptualized differently over time and across contexts; there are multiple interpretations (Chung & Walsh, 2000). Among educators of early childhood, it has been widely subscribed as a notion of developmental appropriateness. Some scholars conceptualized child-centeredness as meeting children’s developmental needs, following developmental theories such as Piaget (1936), while others focused on children’s interests and associated the idea with Dewey’s progressive education (1956). Dewey believed that children’s interest drives instruction, and emphasized children’s process of learning, especially *learning by doing*. It should be noted, however, that such developmentalism views of child-centeredness have been questioned in that they have been predominantly based on Western developmental models and may not be universally applicable across different cultural and societal contexts. Scholars who support such a poststructural view further advocate that children’s multiple views and perspectives, rooted in their life experiences, should be incorporated and respected in early education (Tzuo et al., 2011). Some other scholars also linked the notion of child-centeredness to ethical guidelines aimed at respecting children’s voices and protecting children’s rights by the United Nations Convention on the Rights of the Child (UNCRC, United Nations, 1989). Viewing children as “rights-bearing” citizens, child-centered education is an educational approach that takes children’s voices and experiences seriously and incorporates them in curriculum and material development, as well as assessment (Pinter, 2023).

2.3 Learner-centered language teaching for adults: Implications for children

In the field of *second language* education, which has been predominantly focused on adult learners, the notion of *learner-centered* teaching has been advocated since the 1970s, shedding light on *learners* and *learning* rather than *language* and *instruction* (Benson, 2012). At that time, language teaching methodologies were primarily driven by linguistics and learners tended to receive little attention in the discussions of language teaching methodologies (i.e., they focused on language rather than learners). However, due to the increased realisation of learner diversity as a result of the expansion of second- and foreign-language education, learner-centered teaching gained greater recognition among language educators. In essence, learner-centered teaching ultimately can be understood as an approach that aims to “empower learners by enabling them to assume an informed and self-directive role in the pursuance of their language-related life goals” (Tudor, 1996, p.xii). It acknowledges learners’ knowledge and experience and adjusts the instruction to fit their needs.

Learner-centered teaching is often associated with the notion of *learner autonomy*, which is usually understood as “the ability to take charge of one’s own learning” (Holec, 1981, p.3). According to Benson (2012), there are five main principles underlying learner-centered teaching to facilitate learner autonomy: namely, “(1) active involvement in student learning, (2) providing options and resources, (3) offering choices and decision-making opportunities, (4) supporting learners, and (5) encouraging reflection” (pp.33–34). However, similar to the criticism against the development appropriateness being too Western-centered discussed above, some scholars also argue that the perception of autonomy varies across cultures (e.g., Littlewood’s (1999) notion of reactive autonomy – more socially oriented and less independent notion of autonomy – in East Asian cultures). Contextualized interpretation of learner-centered teaching appears to be necessary. In language education, the term “learner-centered” teaching is sometimes used as “a cover term” encompassing related pedagogical approaches such as communicative and humanistic language teaching, negotiated curriculum, and self-assessment (Benson, 2012, p.31). Although the above discussion on learner-centered language teaching has primarily developed around adult learners, the essence of learner-centered language teaching should be applicable to language education for young learners.

2.4 Child-centered assessment

In order to promote child-centered instruction in second/foreign language education for young learners, the present paper argues for greater consistency between teaching and assessment; assessment research and practices should be child-centered as well. One can conceptualize child-centered assessment broadly, without referring to any particular method. Child-centered assessment is any approach where (a) children are invited to participate in the assessment not merely as passive objects or subjects of assessment but also as social agents and (b) children's views and experiences can directly or indirectly contribute to the improvement of assessment theories, practices, and consequences. Most importantly, children should benefit from the assessment process by having an opportunity to learn something meaningful – such as the target language, assessment, or, more broadly, gaining some educationally meaningful experience (see also Britton, 2021, and Prošić-Santovac & Rixon, 2019 for discussions on formative assessment for young learners – ongoing assessment aiming directly at assisting students' learning). Child-centered assessment also requires flexibility in light of the context in which teaching and learning take place.

3. Insights from previous research

To better explain child-centered assessment, three lines of empirical work are presented in this section: (1) listening to what children say and want (children's assessment literacy); (2) giving children greater autonomy (self-assessment); and (3) making use of children's experience, especially when using digital technology in assessment.

3.1 Children's Language Assessment Literacy

The first example concerns *language assessment literacy* (LAL) – one's knowledge and skills about how language assessment works and its consequences. LAL was originally suggested by Brindley (2001) in the context of professional development for language teachers. Brindley argued that teachers' understanding of the social consequence of language assessment should be one of the critical components of language teacher education. There are different conceptualisations and models of LAL (e.g., Bøhn & Tzagari, 2022; Brindley, 2001; Davies, 2008; Fulcher, 2012; Inbar-Lourie, 2008; Lee, 2019). Although these models were based on different epistemological orientations and methodological approaches (e.g., deductive [theory-driven] or inductive [data-driven]), they generally agree that LAL is a

multifaceted construct. One can argue that such multi-components of LAL can be classified into three major elements (Giraldo, 2019): *knowledge* (knowledge about learning and measurement theories and knowledge about assessment takers, etc.); *skills* (skills to develop and implement assessment as well as to analyze the assessment results); and *principles* (understanding of proper use of assessment results, ethics, and equity, etc.).

Although previous studies on LAL predominantly concerned teachers' LAL, some researchers suggested differentiated needs among different groups of stakeholders (e.g., Harding & Kremmel, 2016; Taylor, 2013). Taylor (2013), for example, classified stakeholders into three groups in the order of the degrees of LAL needs: a core group (test developers and researchers); an intermediary group (language teachers and course instructors); and a peripheral group (the general public and policy-makers). She proposed that a different LAL was required depending on stakeholders' needs. For example, for language teachers, pedagogical skills to implement assessments are critical while theoretical knowledge of assessment is less important.

So far, among various stakeholders, very limited attention has been paid to language learners – even adult learners, not to mention young learners – in the discussions of LAL (Lee & Butler, 2020). A few exceptions included Watanabe's (2011) intervention study; the study found that teaching basic principles of language assessment to foreign language learners at college changed their attitudes towards assessment from negative to positive. Malone (2017) noted the scarce attention to test-takers in the research of LAL and stated that incorporating test-takers' perspectives can enhance the validity of the test. Indeed, test validation studies (but not framed as LAL studies) incorporated test-takers' cognitive processes and strategies that they employed while they took the test as a source of validation (Butler, 2018; Cohen & Upton, 2006; Winke et al., 2018).² Discrepancies in perception toward assessment between teachers and students (e.g., teachers believe that they offer sufficient information about assessment to their students while the students do not agree) have been reported as well (e.g., Sato & Ikeda, 2015; Vlanti, 2012).

To respond to the situation described above, it can be argued that a deeper understanding of learners' perspectives on assessment is critical not only for the validity concerns but also for fair and ethical assessment practice. It should also be noted that very little is known about children's LAL. The study below, conducted

2. Tests can be considered as a type of assessment technique that focuses on measuring one's attributes and abilities (Brown & Abeywickrama, 2019). However, assessments and tests are often used interchangeably in practice.

by the present author and her colleagues (Butler et al., 2021), is one of the rare examples of an effort to understand young learners' LAL.

Butler et al.' (2021) study was conducted in the context of English as an additional language in China. The participants were ten Grade 4 and ten Grade 6 students who had received English instruction at school from Grade 1. They were first asked to take a mock English test that they routinely took³ and were interviewed concerning three questions corresponding to the three major components in LAL: *knowledge*, *skills*, and *principle*. By way of understanding the specific contexts of the study, it is important to note that the curriculum requirement of English was set lower compared with other academic subjects and there was a substantial discrepancy between the target English proficiency level specified by the national curriculum in China and the actual proficiency levels of the participating children.

First, with respect to the knowledge component, Butler et al.'s study results indicated that the children already had a great deal of knowledge and experience with language assessments and could articulate their critical views toward the current assessment practice that they observed and experienced. Regarding the knowledge components, the children viewed that the current assessment at school was measurement-oriented and thus "it doesn't really help you improve your ability" (Luna,⁴ G6). Instead, they indicated that it would be desirable to have more learning-oriented assessments that could provide them with diagnostic information. The children expressed their preference for performance-based assessment although they observed that the current speaking tests⁵ at school excessively emphasized grammatical accuracy. As a target of assessment, they believed that communicative abilities should be more valued. A child below, for example, showed a sophisticated view of a speaking construct; he stated that spontaneity should be the focus of the speaking tests:

3. The mock test consisted of English items that were similar to those with which the students were familiar both in terms of content and format, covering all four skills. Some of the items were revised versions of the city-wide standardized test items that the students take every year, while others were similar to the classroom assessment items used by their teachers.

4. Pseudonym names are used. The interview was conducted in Chinese, but only the English translations are shown here due to the space availability. See Butler et al. (2021) for the original utterances in Chinese.

5. The terms "assessment" and "test" were used interchangeably in the original Chinese.

In spoken language, you have to say what you are thinking, but in written language, you can think about whether it is appropriate and whether the grammar is correct before writing it down. So oral exam is also about your ability to make immediate responses. And in oral expressions, if you suddenly forget a word, you have to think of another word immediately. (Guest, G6)

Children also could articulate a few “difficult things” – meaning construct irrelevant factors – such as anxiety and nervousness that would mask their true abilities.

Second, concerning their views towards teachers’ skills to conduct assessments (i.e., assessment designs, procedures, and content), the children indicated their critical observations; the assessment should be more meaning-based (e.g., incorporating stories instead of focusing on forms) and more cognitively challenging, while at the same time, assessment should be more accessible to children (e.g., meeting their interests and curiosity). The children observed that the design of the current school English assessment lacks authenticity, as exemplified in the excerpt below:

I think that the design of a test should be a little more “humanized,” when the basic communication is met, there should not be too much attention on the details, because the test is meant for using the language, it should not be testing only for the sake of testing . . . As long as the tester can understand your meaning, it is okay. (Scarlet, G6)

Overall, the participating children embraced the idea that teachers would consult with children when designing assessments even though they had never experienced it.

I think they [=teachers] should consult with the students because adults may have different thoughts than children. For example, adults may have more knowledge than children, and sometimes the questions they design maybe too difficult for us to understand. (Kelly, G4)

Giving children a chance to co-develop an assessment and/or incorporate their views into assessment designs and procedures would enhance their meaningful engagement in assessment and empower their own learning in the long run.

Finally, regarding the children’s view toward the consequences of the assessment (i.e., the principle element in LAL models), the children expressed varied views toward “fairness” of the current practice in which the target level of the assessment was set low. Because children had different accessibility to English lessons outside of the school, some children considered that setting a low target was “fair”, while others did not think it “fair” because the assessment did not reflect their true ability, especially those who studied English more.

This case study indicated how young learners had already developed a high level of understanding of assessment practice and consequences based on their experience. One can suspect that listening to their voices and needs would not only be useful for test validation but also be valuable for recognising their agency. Through this experience (i.e., articulating their views on assessment), children also have a chance to reflect on their own learning. Moreover, through the experience of feeling that they can contribute to the teachers' assessment practice, the children may be able to increase their self-efficacy in their language learning. In any event, listening to their voices and understanding their needs can be a step towards making assessments more child-centered.

3.2 Giving children greater autonomy: Self-assessment

Self-assessment is another example of making assessment more child-centered. Self-assessment is a type of assessment in which learners self-reflect their own abilities and performance (Black & Wiliam, 1998). This self-reflective nature makes self-assessment unique; self-assessment corresponds well with learner-centered learning and self-regulated and autonomous learning. Self-assessment is primarily designed for formative purposes and is meant to be beneficial for promoting learning (Oscarson, 2013). In other words, self-assessment is particularly suited as an *assessment for learning* – using an assessment to directly assist students' learning. Self-assessment is also considered a relatively low-stake assessment and is less anxious for learners. This affective merit is particularly important for children who tend to be vulnerable to negative experiences with assessment (Carless & Lam, 2014). Moreover, self-assessment can be advantageous for teachers in that its administration is usually less constrained by large class sizes or time limitations. In recent years, teachers of young language learners can often find self-assessment items and activities in coursebooks and other materials, including digital tools that can assist teachers in creating self-assessments easily online. For example, the Council of Europe developed CEFR-based descriptors for children ages 7–10 and 11–15 (Council of Europe, 2018). Empirical research has also shown that self-assessment can have positive influences on young learners' learning if appropriate guidance is provided (see Butler, 2016, for a review of relevant studies).

Despite such potential benefits and promotion of self-assessments, however, teachers of young language learners do not seem to make use of them sufficiently in practice (Nikolov & Timpe-Laughlin, 2020). This relative underuse of self-assessment may be, in part, due to the teachers' concern about the credibility of self-assessment; teachers of young language learners may wonder about the extent to which children are capable of 'accurately' self-assessing their abilities and performance (e.g., Butler, 2016). Indeed, Piaget's (1936) influential theory of cognitive

development predicted that preoperational children (ages 2–7) are constrained by egocentric thoughts and are incapable of making an objective judgment of their own performance. Children at the concrete operational stage (ages 7–11) gradually develop the ability to make judgments while relying on logical thinking and taking other people’s perspectives, which speaks in favor of implementing self-assessment with primary school learners, in theory.

In fact, recent research has shown that children develop self-reflective abilities even earlier than what has been previously believed (Muenks et al., 2018). Although cognitive maturity certainly influences children’s self-evaluative ability, one’s self-evaluative ability depends on various factors in addition to children’s cognitive maturity. For example, the ‘accuracy’ of children’s self-assessment increases if they are asked to self-evaluate their performance on concrete tasks at hand, tasks that they are familiar with, and tasks that require relatively lighter cognitive resources to complete than responding to decontextualized and/or abstract self-assessment items. Butler and Lee (2006), for instance, compared two types of self-assessment administration: using contextualized items (e.g., I could sing the ABC song well in class today) and decontextualized items (e.g., I can sing songs in English well). The study found that making the items contextualized increased the accuracy of children’s self-assessment responses (judged in relation to an objective measure and their teacher’s evaluation) across the age groups that they examined (Grades 4 and 6, ages 9–10 and 11–12 respectively). Contextualized self-assessment was also found to be less influenced by individual children’s attitudes and affective factors such as motivation, anxiety, self-confidence, and so forth. Having greater experiences with self-assessment also helps children to increase the accuracy of their responses to the self-assessment items. For example, Butler and Lee (2010), in a longitudinal study conducted among 254 English-learning Korean 6th-grade students, found that regular administration of self-assessment at the end of each unit in their curriculum increased the accuracy of their self-assessment responses.

Self-assessment can be reliably used among young language learners if appropriate guidance and practice opportunities are provided. However, perhaps more importantly for classroom teachers, self-assessment can be effectively used as a learning or instructional tool, not simply as a measurement tool. When placing children’s learning at the center of assessment purposes, one may even challenge the “uncontested” premise that learners’ accurate self-assessment responses are always desirable. Indeed, empirical research on *calibration* – the degree to which one’s self-efficacy and actual ability match – indicated that accurate judgment of one’s own performance does not necessarily contribute to higher achievement (Andrade, 2019). The accuracy of self-assessment, therefore, may not be the most critical concern when taking a view of assessment for learning.

Using self-assessment *as a learning tool* for language-learning school-age children appears to be promising, given that children substantially develop self-regulated abilities during the preschool and primary school years (Morrison et al., 2010). Sociocultural theory (Vygotsky, 1934/1978) also supports the idea of using self-assessment as a learning tool because self-assessment would provide children with an opportunity to identify the gap between their goals and current achievement state. Empirical studies on self-assessment among children, while limited, also support such theoretical predictions. As mentioned above, Butler and Lee (2010) found that engaging in self-assessment itself increased children's self-confidence and facilitated English learning. Self-assessment is also found to help increase children's motivation (Chalkia, 2012) and metacognitive abilities (Anastasiadou, 2013).

To use self-assessment in a child-centered fashion, however, teachers need some strategies. Below are some suggestions for teachers of young language learners that have been empirically tested (adapted from Butler, 2022).

3.2.1 *Letting children be familiar with self-assessment gradually*

As it may take some time for children to get used to self-assessing their *performance* and even longer to self-assess their *abilities* (Butler, 2005), it is recommendable that teachers start with something simple. It is important to make the self-assessment items concrete and contextualized. It would be easier for children to respond to items such as “I could understand XXXX story that the teacher told us today in class” right after the activity, compared with more general and decontextualized items such as “I can understand stories in English well.” The contextualized items can also facilitate children's self-reflection. When children engage in complicated tasks that require multiple knowledge and skills (including non-linguistic knowledge), it is advisable to construct items that focus on one sub-skill or aspect of the task. Finally, the self-assessment items should be designed in such a way that children are able to compare their performance and abilities over time, rather than comparing with those of other children; temporal comparison allows children to see their progress and feel a sense of achievement.

3.2.2 *Inviting children to set goals and criteria for self-assessment*

It is critically important for children to understand the goals and criteria of the assessment. Self-assessment can enhance children's engagement and autonomy if they are invited to join the process of setting goals and criteria. Very young children – preschool and lower grade primary school children – can be asked to choose types of emoticons (e.g., happy faces and stars) to indicate the degree of achievement in tasks. Such a process helps children to be aware of each criterion

and feel ownership of the assessment. It also enhances children's enjoyment and engagement in self-assessment.

To make children's learning progress more visible, it is advisable to make self-assessment items to be process-oriented rather than accomplishment-oriented. As shown in Figure 1, for example, instead of asking children to respond to items dichotomously (namely, "can do" or "cannot do"), teachers can ask children the degree to which they can accomplish each task. Such a format, again, can help children to develop greater autonomy in their own learning.




For the activities indicated below, how much do you think you can do?			
			
	I can do it already	I am almost able to do it	Not yet but soon (I need some help)
I can understand when someone talks about today's weather in simple sentences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can act according to what the teacher says, such as "stand up" and "clap your hands"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can greet people using simple phrases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can say what food I like and what food I don't like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 1. An example of process-oriented self-assessment items

For older children – upper primary school children – or children who have already developed a certain degree of autonomy in their learning, teachers can ask them to come up with a goal for the next step, while giving them some guidance and scaffolding. In the example below (Figure 2), when preparing for teleconferencing with foreign friends as a task implemented as part of an English lesson, children in groups set up goals for each step. In this particular case, the teacher showed an example goal in Phrase 2 so that the children could follow the example, making it easier for them to come up with their own goals for other phases (Hatai, 2022).

	Phase 1	Phase 2	Phase 3
Use of words and expressions	<i>I am able to express things related to myself, such as my favorite things and activities, using the words and expressions I have learned.</i>	While there may be some minor mistakes, I am able to express things related to myself, such as my favorite things and activities, using the words and expressions I have learned.	<i>While there may be some major mistakes, I am almost able to express things related to myself, such as my favorite things and activities, using the words and expressions I have learned.</i>
Fluency			
Strategies for communication			

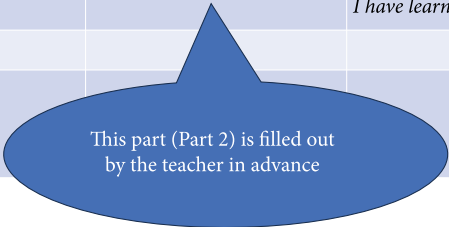


Figure 2. An example of inviting children to identify their own goals for an activity

According to Hatai, a classroom teacher who designed this self-assessment activity, the students took the self-assessment more seriously and showed greater engagement than with ready-made self-assessment items.

3.2.3 Using self-assessment to stimulate children's motivation, self-confidence, and self-regulation

Self-assessment can be a great tool for enhancing children's motivation, self-confidence, and self-regulation. In order to help them get motivated, it is important to make the assessment goal concrete and achievable. For example, when children engage in a task in which they make a menu of a new restaurant, responding to a self-assessment item such as "I could spell five food names in English" can help them self-regulate their learning and get a sense of achievement. For older children, setting a cognitively slightly challenging goal, such as participating in cross-school information exchange activities, may stimulate their motivation.

To use self-assessment for motivation purposes, it is important to value and respect children's responses even if they are not 'accurate.' Children's responses to their self-assessments can be influenced by a number of factors – both individual factors (age, personality, self-confidence levels, etc.) and external factors (classroom environments, cultural norms, etc.). Thus, we, as educators, need to understand that children's responses to self-assessment are not necessarily a direct reflection of their performance, or self-efficacy and self-confidence (Butler, 2018).

For older children who become sensitive to social perception (i.e., how people perceive others), teachers need to create a safe and trustworthy environment before conducting self-assessment. Doing self-assessment is, in fact, a very social

and emotional activity as well as an individual cognitive activity (Andrade & Brown, 2016). In a competitive classroom, children may inflate their evaluations. In certain cultures, children may not feel comfortable disclosing their self-assessment results to teachers or the public. In multicultural classrooms, therefore, extra consideration may be necessary before implementing self-assessment.

3.2.4 *Providing constructive feedback*

Feedback is a critical element in any assessment, and self-assessment is no exception. Self-assessment, however, may be unique in that it can provide both external feedback (feedback from a teacher or other individuals) and internal feedback (children give themselves feedback). Once the children respond to self-assessment items, it is critical to receive affirmative feedback from a teacher and have an opportunity to discuss the next step. Ideally, feedback should be provided individually and promptly, although it can be challenging for teachers, especially those who have large classes. Making use of digital technology may be a solution for such logistical challenges. (The next section will further discuss the use of digital technology.)

Teachers can also assist children in generating feedback by themselves (internal feedback) by providing them with guidance and modelling when reflecting on the results of self-assessment. Children's internal feedback can be facilitated if the self-assessment is used in conjunction with some form of metacognitive or metalinguistic tasks. For example, children can respond to self-assessment when they use a computer program in which they can compare their pronunciation with that of the teacher.

As the above suggestions signify, self-assessment has the potential to be used as a learning and instructional tool and can directly assist children's learning, autonomy, self-confidence, and motivation. By inviting children to actively engage in the whole process of self-assessment, including at the designing stage, teachers can respect children's agency and autonomy in a greater fashion than the traditional tests that are administered solely in a top-down manner.

3.3 Making use of children's experience: Digital technology in assessment

Assessment can be carried out in a child-centered fashion by making use of various digital technologies, such as screen media and digital games. Naturally, using digital technology itself does not automatically make the assessment "child-centered"; however, it has potential if it is used wisely. Many children nowadays, at least children in developed countries, are growing up with digital technology. For those children who are used to engaging in digital technologies in daily life, using such technologies as part of assessment tools aligns with their daily experiences

and contributes to a greater child-centered approach. In addition, digital technology is changing the way we communicate and learn. In other words, the target communicative abilities that children want to develop are changing. We have also gradually discovered that the use of digital technology influences some cognitive functions and brain activities (Firth et al., 2019). One could argue that taking steps to maximize the benefits of digital technology for children's language education, including assessment, is critical.

The influence of digital technology on language assessment includes changes in the constructs, procedures, and the use of assessments. For example, reading is no longer processing printed texts only but often means processing multimodal information simultaneously in combination with printed texts. The boundary between oral and written languages is increasingly obscure (e.g., *text speak* – a type of language used in the social networking service [SNS]). Generative artificial intelligence (AI) is greatly impacting the way we write. Such changes should be factored into construct definitions in language assessment. Assessment itself is progressively delivered through computers and mobile phones (e.g., Neumann et al., 2019).

There are a few potential benefits for teachers to use digital technology in assessment. First, digital technology can help teachers evaluate their students' work; for example, digital technology can organize the assessment data efficiently. As a result, teachers can monitor individual children's progress more easily and respond to the children promptly. From the children's point of view, this means that they can get more individualized feedback and assistance from the teachers in a timely manner. Some digital applications may have automated scoring functions; this does not mean that such applications take over the teachers' role as assessors, but they can be incorporated as part of teachers' classroom assessments. While there are individual differences in preferred learning styles, for many children growing up with technology, assessment through digital technology *can* decrease anxiety and increase motivation (Wei, 2022). After all, using digital technology itself is generally enjoyable for many children (Ningsih & Mulyono, 2019).

3.3.1 *Game-based classroom assessment*

Incorporating some game elements in assessment can make the assessment more enjoyable and motivational for children, and thus contribute to the broader endeavor of child-centered assessment. Gaming can be considered an enjoyable activity and humans have used games for learning as well as for entertainment for centuries. Courtney and Graham's (2019) large-scale study with young learners of several modern languages ($n=3,437$, ages 8–13) indicated that the children enjoyed a game-based assessment irrespective of their attainment result. Nowadays, there are a number of computer apps available for teachers to develop a game-based assessment easily for their classes (e.g., Kahoot!, Gimket, Quizlet,

and so forth).⁶ Teachers who implement low-stakes game-based classroom assessments often find them useful to increase children's attention in class and enhance their motivation. It is not unusual to see children answering assessment items until they can satisfy their performance (e.g., to get the perfect score). Presumably, such actions would contribute to their learning (Butler et al., 2014).

To make the game-based assessment effective for children's learning, however, children need to understand that the assessment is designed to assist their learning, not just for fun. Importantly, it should also be noted that some children may not like gaming in classroom learning. Incorporating social comparative elements in game-based assessment (e.g., identifying winners) can be dangerous, even for a low-stakes assessment, and may have a lasting negative impact on certain children.

3.3.2 *E-portfolio*

Another example of using digital technology to make assessment potentially child-centered is e-portfolios. The portfolio is "a sample of student work that shows growth over time" (O'Malley & Pierce, 1996, p.35). While portfolios are implemented differently across classrooms in practice, the major characteristics of portfolios are to collect a range of students' work *in a systematic way* so that one can see improvement over time (Lynch & Shaw, 2005). Portfolios are situated in individual children's learning contexts; they are contextually rich and highly individualized (Weigle, 2002). They usually contain self-assessment elements, and thus give children an opportunity to self-monitor their progress against goals set by themselves or set in negotiation with the teacher. With guidance, children may be able to take greater initiative to collect sample work and learn to pay greater attention to the process of their own learning. They may even participate in developing the criteria for evaluation if appropriate scaffolding is provided. In this respect, one can argue that a portfolio can be a child-centered assessment.

To make the traditional paper-and-pencil portfolio into a digital form (i.e., e-portfolio), we can expect additional merits (Abrar-ul-Hassan et al., 2021). First, e-portfolios allow children to collect and save multimodal products, including audio speeches and videos. The multimodal products further enrich the content of the portfolio; the multimodality better reflects children's actual linguistic activities in their real lives. Moreover, allowing multimodal formats in the portfolio often stimulates children's creativity and motivation. For example, children may video-record their speech while acting as if they were a reporter, actor, company owner, and so forth. Educators often find that children voluntarily repeat the

6. Some applications, such as the Language Magician (https://www.goethe.de/ins/gb/en/spr/unt/kum/dfk/the_language_magician.html), allow teachers to implement game-based assessments without creating one by themselves.

assigned task so that they can upload satisfied products (Pinter, 2019b). Research on tasks shows that repeating tasks can enhance learners' motivation, confidence, and learning (Bygate, 2001). It is important to note that, in this video-making assessment task, children *autonomously* engage in task repetition, without being told by their teachers.

Admittedly, empirical studies on e-portfolios among young learners remain limited; however one can anticipate some additional potential merits of using them. Such merits include: (1) encouraging students' lifelong learning due to the relative ease of storing the products in files and sharing them with others; (2) providing an opportunity to enhance their digital skills; (3) offering higher practicality than the paper-based portfolios; and (4) if adopted school-wide, allowing institutions to have relatively uniform assessment practices (e.g., Zulfikar, 2016). In recent years, due to the growing number of web-based applications, it is increasingly easier for teachers to implement e-portfolios in their classrooms.

3.3.3 *Considerations when using digital technology*

While digital technology has the potential to make the language assessment more child-centered, there is a word of caution. First of all, as mentioned already, digital technology itself does not guarantee child-centered assessment. Digital technology can aid children's learning greatly, but it can also impact children's learning negatively. A strategic use of digital technology can help the assessment be more child-centered.

Second, teachers need to be mindful that children differ considerably in terms of their digital literacy. Some children have substantial digital experiences and/or richer digital environments at home, while others do not have such experiences or environments. Some children may have greater anxiety if they engage in assessment through digital technology. Sufficient consideration and assistance are indispensable if digital technology were to be used in assessment.

Finally, a high degree of ethics is required for teachers when using digital technology for assessment. Digital technology can easily collect information not only on children's performance but also on personal information. For example, a child's video portfolio may contain information about her family. While collected assessment information can be used to assist their learning effectively, it can cause serious ethical problems if it is misused. Teachers must be fully aware that, in the age of digital technology, it is increasingly challenging to maintain children's privacy when using digital technology both in instruction and assessment. Timmis et al. (2015) addressed the potential problems with the "lack of agency and control of personal data" when using digital technology for assessing children and young people and emphasised the importance of making "assessment data more visible to learners" (2015, p.16).

4. Conclusion









This paper explored the idea of *child-centered assessment* for young language learners, both in terms of research and practice. Traditionally, assessment, including language assessment for young learners, tends to be developed and implemented in a top-down manner and children's voices have rarely been heard. Borrowing ideas from previous discussions on *research with children* and *child-centeredness*, this paper advocated assessment approaches in which (a) children can engage in assessment as social agents instead of merely being passive receivers of assessment; and (b) children's views and voices are directly or indirectly reflected in assessment practice. Child-centered assessments are designed to directly assist children's learning and facilitate their autonomy, self-regulation, and self-confidence.

This chapter used three lines of research – language assessment literacy for children, self-assessment, and children's experiences with digital technology in assessment – as examples to illustrate child-centered assessments in young learners. While developing language assessment literacy is important for any stakeholders, assessment literacy among learners, especially young ones, has seldom been explored. Therefore, greater efforts should be directed toward understanding children's knowledge and experience with assessment and assisting them in enhancing their assessment literacy. This is critical not only for test validation but also for potentially empowering children. Self-assessment is another example through which learners can enhance autonomy in their own learning. Previous studies, involving both adults and young learners, have focused on understanding how accurately learners can assess their own performance and abilities. However, more research is needed to better understand the optimal use of self-assessment in directly assisting children's learning and autonomy. In other words, how to make use of self-assessment as a learning tool for children rather than merely a measurement tool for teachers and policymakers. Finally, as an example of utilising children's experience in assessment, the chapter also discussed digital technologies in assessment. While digital technologies have significant potential as an assessment means, numerous ethical issues remain inadequately addressed, and serious discussions are urgently needed among practitioners and researchers working with young learners.

It should be noted that child-centered assessment needs to be contextualized; local sociocultural and educational factors are fully taken into account. The direct implementation of child-centered assessment may not always be the most desirable approach depending on the specific assessment purposes. Particular cultural and educational contexts sometimes may make it difficult for teachers to take child-centered approaches to assessment. Even in those contexts, however, effort should

be made to consider if there is room for making the assessment more child-centered. Employing such approaches as alternatives to the traditional top-down assessment practice can contribute to methodological diversity in assessment.

References

-  Abrar-ul-Hassan, S., Douglas, D., & Turner, J. (2021). Revisiting second language portfolio assessment in a new age. *System*, *103*, 102652.
- Anastasiadou, A. (2013). Self-assessment: Its impact on students' ability to monitor their learning process in the English classroom and develop compensatory strategies. *Research Papers in Language Teaching and Learning*, *4*(1), 177–197. <https://rpltl.eap.gr/images/2013/04-01-177-anastasiadou.pdf>
-  Andrade, H. L. (2019). A critical review of research on student self-assessment. *Frontiers in Education*, *4*.
- Andrade, H. L., & Brown, G. T. L. (2016). Student self-assessment in the classroom. In G. T. L. Brown & L. R. Harris (Eds.), *Handbook of human and social conditions in assessment* (pp. 319–334). Routledge.
-  Benson, P. (2012). Chapter 3 Learner-Centered Teaching. In A. Burns & J. Richards (Eds.), *The Cambridge Guide to Pedagogy and Practice in Second Language Teaching* (pp. 30–37). Cambridge University Press.
-  Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy and Practice*, *5*(1), 7–74.
-  Bøhn, H., & Tsagari, D. (2022). Teacher educators' conceptions of language assessment literacy in Norway. *Journal of Language Teaching and Research*, *12*(2), 222–233.
- Brindley, G. (2001). Language assessment and professional development. In C. Elder, A. Brown, K. Hill, N. Iwashita, T. Lumley, T. McNamara, & K. O'Loughlin (Eds.), *Experimenting with uncertainty: Essays in honour of Alan Davies* (pp. 126–136). Cambridge University Press.
- Britton, M. (2021). *Assessment for learning in primary language learning and teaching*. Multilingual Matters.
- Brown, H. D., & Abeywickrama, P. (2019). *Language assessment: Principles and classroom practices*. Pearson.
- Butler, R. (2005). Competence assessment, competence, and motivation between early and middle childhood. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 202–221). The Guilford Press.
-  Butler, Y. G. (2016). Self-assessment of and for young learners' foreign language learning. In M. Nikolov (Ed.), *Assessing young learners of English: Global and local perspectives* (pp. 291–315). Springer.
-  Butler, Y. G. (2018). The role of context in young learners' processes for responding to self-assessment items. *The Modern Language Journal*, *102*(1), 242–261.
-  Butler, Y. G. (2022). Expanding the role of self-assessment: From assessing to learning English. In D. Valente & D. Xerri (Eds.), *Innovative practices in early English language education* (pp. 191–210). Palgrave Macmillan.

- doi Butler, Y. G., & Lee, J. (2006). On-task versus off-task self-assessment among Korean elementary school students studying English. *The Modern Language Journal*, 90(4), 506–518.
- doi Butler, Y. G., & Lee, J. (2010). The effect of self-assessment among young learners. *Language Testing*, 27(1), 5–31.
- doi Butler, Y. G., Someya, Y., & Fukuhara, E. (2014). Online games for young learners' foreign language learning. *ELT Journal*, 68(3), 265–275.
- doi Butler, Y. G., Peng, X., & Lee, J. (2021). Young learners' voices: Towards a learner-centered approach to understanding language assessment literacy. *Language Testing*, 38(3), 429–455.
- Bygate, M. (2001). Effects of task repetition on the structure and control of language. In M. Bygate, P. Skehan, & M. Swain (Eds.), *Task-based learning: Language teaching, learning, and assessment* (pp. 23–48). Longman.
- doi Carless, D., & Lam, R. (2014). The examined life: Perspectives of lower primary school students in Hong Kong. *Education 3–13: International Journal of Primary, Elementary, and Early Years Education*, 42(3), 313–329.
- Chalkia, E. (2012). Self-assessment as an alternative method of assessing speaking skills in the sixth grade of a Greek state primary school classroom. *Research Papers in Language Teaching and Learning*, 3(1), 225–239. <https://rpltl.eap.gr/images/2012/03-01-225-Chalkia.pdf>
- doi Christensen, P., & James, A. (Eds.). (2017). *Research with Children: Perspectives and Practices* (3rd ed.) Routledge.
- doi Chung, S., & Walsh, D. J. (2000). Unpacking child-centredness: A history of meanings. *Journal of Curriculum Studies*, 32(2), 215–234.
- doi Cohen, A. D., & Upton, T. A. (2006). *Strategies in responding to new TOEFL reading tasks* (TOEFL Monograph No. MS-33). Educational Testing Service.
- Council of Europe (2018). *Collated representative samples of descriptors of language competencies developed for young learners: resources for educators*. <https://rm.coe.int/collated-representative-samples-descriptors-young-learners-volume-1-ag/16808b1688>
- doi Courtney, L., & Graham, S. (2019). 'It's like having a test but in a fun way': Young learners' perceptions of a digital game-based assessment on early language learning. *Language Teaching for Young Learners*, 1(2), 161–186.
- doi Davies, A. (2008). Textbook trends in teaching language testing. *Language Testing*, 25(3), 327–347.
- Dewey, J. (1956). *The child and the curriculum*. University of Chicago Press.
- doi Ellis, G., & Ibrahim, N. (2021). Teachers' image of the child in an ELT context. In A. Pinter & K. Kuchah (Eds.), *Methodological issues in researching in young language learning in school contexts* (pp. 185–205). Multilingual Matters.
- doi Firth, J., Torous, J., Stubbs, B., Firth, J. A., Steiner, G. Z., Smith, L., Alvarez-Jimenez, M., Gleeson, J., Vancampfort, D., Armitage, C. J., & Sarris, J. (2019). The "Online brain: How the Internet may be changing our cognition. *World Psychology*, 18(2), 117–244.
- Froebel, F. (1826/1989). *The education of man* (W. Hailmann, trans.). Appleton. (Original work published 1826).
- doi Fulcher, G. (2012). Assessment literacy for the language classroom. *Language Assessment Quarterly*, 9(2), 113–132.

- doi Giraldo, F. (2019). Language assessment practices and beliefs: Implications for language assessment literacy. *HOW*, 26(1), 35–61.
- doi Harding, L., & Kremmel, B. (2016). Teacher assessment literacy and professional development. In D. Tzagari & J. Banerjee (Eds.), *Handbook of second language assessment* (pp. 413–428). De Gruyter.
- Hatai, R. (2022, June 19). *Discussion* [Panel discussion]. The 42nd Annual Conference of the Japan Association for the Study of Teaching English to Children (JASTEC). <https://jastec.smoosy.atlas.jp/files/2762>
- Holec, H (1981). *Autonomy in foreign language learning*. Pergamon.
- doi Inbar-Lourie, O. (2008). Constructing an assessment knowledge base: A focus on language assessment courses. *Language Testing*, 25(3), 385–402.
- doi Kuchah, K., & Pinter, A. (2021). Researching young language learners in school contexts: Setting the scene. In A. Pinter & K. Kuchah (Eds.), *Methodological issues in researching young language learners in school contexts* (p. 123). Multilingual Matters.
- doi Lee, J. (2019). A training project to develop teachers' assessment literacy. In E. White & T. Delaney (Eds.), *Handbook of research on assessment literacy and teacher-made testing in the language classroom* (pp. 58–80). IGI Global.
- doi Lee, J., & Butler, Y. G. (2020). Reconceptualizing language assessment literacy: Where are language learners? *TESOL Quarterly*, 54(4), 1098–1111.
- doi Littlewood, W. (1999). Defining and developing autonomy in East Asian contexts. *Applied Linguistics*, 20(1), 71–94.
- doi Lynch, B., & Shaw, P. (2005). Portfolios, power, and ethics. *TESOL Quarterly*, 39(2), 263–297.
- Malone, M. E. (2017). *Unpacking language assessment literacy: Differentiating needs of stakeholder groups* [Paper presentation]. East Coast Organization of Language Testers.
- doi Morrison, F. J., Ponitz, C. C., & McClelland, M. M. (2010). Self-regulation and academic achievement in the transition to school. In S. D. Calkins & M. A. Bell (Eds.), *Child development at the intersection of emotion and cognition* (pp. 203–224). American Psychological Association.
- doi Muenks, K., Wigfield, A., & Eccles, J. S. (2018). I can do this? The development and calibration of children's expectations for success and competence beliefs. *Developmental Review*, 48, 24–39.
- doi Neumann, M. M., Anthony, J. L., Erazo, N. A., & Neumann, D. L. (2019). Assessment and technology: Mapping future directions in the early childhood classroom. *Frontiers in Education*, 4, 116.
- doi Nikolov, M., & Timpe-Laughlin, V. (2020). Assessing young learners' foreign language abilities. *Language Teaching*, 54(1), 1–37.
- doi Ningsih, S. K., & Mulyono, H. (2019). Digital assessment resources in primary and secondary school classrooms. *International Journal of Interactive Mobile Technologies*, 13(8).
- O'Malley, J. M., & Pierce, L. V. (1996). *Authentic assessment for English language learners: Practical approaches for teachers*. Longman.
- doi Oscarson, M. (2013). Self-assessment in the classroom. In A. Kunnan (ed.), *The companion to language assessment, Vol. II: Approaches and development* (pp. 712–729). Wiley-Blackwell.
- Piaget, J. (1936). *Origins of intelligence in the child*. Routledge & Kegan Paul.

-  Pinter, A. (2019a). Learning to become researchers: Towards participation? In A. Eckhoff (Ed.), *Participatory research with young children* (pp. 177–194). Springer.
-  Pinter, A. (2019b). Agency and technology-mediated task repetition with young learners: Research and implications for primary classroom practice. *Language Teaching for Young Learners*, 1(2), 139–160.
-  Pinter, A. (2022). Child-centered ethics in second language education: Navigating the ‘ethical maze’ when working with child participants in research. *Language Teaching for Young Learners*, 4(1), 4–29.
-  Pinter, A. (2023). *Engaging children in applied linguistics research*. Cambridge University Press.
-  Prošić-Santovac, D., & Rixon, S. (2019). *Integrating assessment into early language learning and teaching*. Multilingual Matters.
-  Sato, T., & Ikeda, N. (2015). Test-taker perception of what test items measure: A potential impact of face validity on student learning. *Language Testing in Asia*, 5(1), 1–16.
-  Taylor, L. (2013). Communicating the theory, practice and principles of language testing to test stakeholders: Some reflections. *Language Testing*, 30(3), 403–412.
-  Timmis, S., Broadfoot, P., Sutherland, R., & Oldfield, A. (2015). Rethinking assessment in a digital age: Opportunities, challenges and risks. *British Educational Research Journal*, 42(3), 454–476.
- Tudor, I. (1996). *Learner-centeredness as language education*. Cambridge University Press.
-  Tzuo, P. W., Yang, C. H., & Wright, S. K. (2011). Child-centered education: Incorporating reconceptualism and poststructuralism. *Educational Research and Reviews*, 6(8), 554–559.
- United Nations (1989). *United Nations Conventions on the Rights of the Child*. United Nations. <https://www.wikihow.com/Cite-the-United-Nations-Convention-on-the-Rights-of-the-Child-in-APA>
- Vlanti, S. (2012). Assessment practices in the English language classroom of Greek junior high school. *Research Papers in Language Teaching and Learning*, 3(1), 92–122. <http://rpltl.eap.gr/images/2012/03-01-092-Vlanti.pdf>
- Vygotsky, L. S. (1934/1978). *Thought and language*. The MIT Press.
- Watanabe, Y. (2011). Teaching a course in assessment literacy to test takers: Its rationale, procedure, content and effectiveness. *Cambridge ESOL Research Notes*, 46, 29–34.
-  Wei, Y. (2022). Toward technology-based education and English as a foreign language motivation: A review of literature. *Frontiers in Psychology*, 13.
-  Weigle, S. C. (2002). *Assessing writing*. Cambridge University Press.
-  Winke, P., Lee, S., Yoon, H.-J., Ahn, J. I., Choi, I., & Cui, Y. (2018). The cognitive validity of child English-language tests: What young language learners and their native-speaking peers can reveal. *TESOL Quarterly*, 52(2), 274–303.
-  Zulfikar, Z. (2016). Benefits of web-based or electronic portfolio assessment in ESL classroom. *Englisia: Journal of Language, Education, and Humanities*, 4(1), 1–9.