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# The Role of Self-Assessment in Developing Letter Recognition Skills in Early Childhood in the UAE

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**ABSTRACT**

Self-assessment is a formative assessment tool that encourages young learners to reflect on their progress, take ownership of their learning and develop basic literacy skills. The aim of this study is to investigate the role of self-assessment in improving letter recognition among early childhood students (ages 4–6) in UAE government kindergartens. The study uses mixed methods of research design to investigate the effectiveness of self-assessment strategies, to assess students' progress in letter recognition, and to identify challenges in implementation. Teacher interviews, classroom observations, student artifacts, and self-assessment tools (star ratings and emotional emoji scales) were used for data collection. The results show that self-assessment leads to significant improvements in letter recognition skills, and students become more aware of their learning strengths and weaknesses. The most effective methods for supporting early learners were visual and interactive self-assessment methods, especially those that included engaging and age-appropriate tools. However, there were challenges like limited attention span, different levels of developmental readiness, and the need for teacher guidance. This indicates that successful implementation of self-assessment requires structured support and scaffolding. The findings of this study emphasize the need for incorporating self-assessment into early childhood literacy instruction, and show how it can increase student motivation, engagement, and autonomy. Further research should investigate other self-assessment strategies that are appropriate for young learners' cognitive and linguistic development to optimize learning outcomes.

## INTRODUCTION

Self-assessment is a formative assessment strategy that enables students to actively engage in their learning by reflecting on their progress, identifying areas for improvement, and taking ownership of their educational journey. In early childhood education, self-assessment plays a critical role in developing foundational literacy skills, particularly letter recognition, which is essential for reading and writing development. The United Arab Emirates (UAE) has taken great strides in improving English language education, utilizing a number of instructional strategies to improve literacy learning. Yet, the contribution of self-assessment in promoting letter recognition skills in early childhood learners is an area that needs

further exploration. Assessments are a guideline to educators to track student progress and adjust methods of instruction to match students' needs (Siemund, Al-Issa, & Leimgruber, 2021). Self-assessment is continuously implemented to support personalized learning pathways that enable students to become more self-aware and engaged in their academic growth (Slavin, 2014). Nevertheless, in early childhood education, self-assessment is not implemented in its sufficient degree, and teachers prevail upon student driven ones. Self-assessment has been widely adopted in upper grade levels, but its practical application in early childhood literacy instruction is inconsistent (Pyle & DeLuca, 2013). In UAE government kindergartens, young learners have difficulty recognizing letters but are not encouraged to assess their own learning progress. However, teacher directed instruction is what traditional teaching focuses on and thus has no time to assess self and practice that in turn allows pupils to develop metacognitive skills. The UAE Ministry of Education has introduced self-evaluation training courses to promote self-assessment, but the practical implementation of self-assessment in early literacy instruction is still in its infancy and needs further refinement (Kasanen & Räty, 2002). There are several challenges that prevent the effective integration of self-assessment in early childhood classrooms. Young learners have short attention spans and are not able to engage in sustained self-assessment practices. Moreover, developmental readiness is not the same, as some students need more time and more structured guidance to understand self-assessment (Gullo & Hughes, 2011). However, educators have difficulty finding suitable self-assessment tools for early learners, which restricts their use in letter recognition instruction. Without structured teacher support, it may be difficult for young learners to assess their learning well, thus diminishing the influence of self-assessment on literacy development. Considering these challenges, this study investigates the role of self-assessment in the development of letter recognition skills among early childhood students in UAE government kindergartens. Specifically, it examines how strategies for self-assessment promote letter knowledge acquisition, it determines how well this approach (i.e., self-assessment strategies) works to improve student learning outcomes, and it looks for barriers to implementation of the self-assessment strategies successfully. This research, therefore, contributes to a better understanding of how self-assessment can be effectively integrated in English literacy instruction within the UAE kindergarten classroom and it brings to light the best practices.

Research Questions:

Guided by the problem statement, this research focuses on addressing the following key questions

    1. How does self-assessment affect students' letter recognition abilities?

    2. What are the different self-assessment strategies in early childhood classrooms?

    3. What are the challenges of incorporating self-assessment into English literacy classrooms?

## Literature Review

## Theoretical Foundations of Self-Assessment

Constructivist learning theories of Piaget and Vygotsky are deeply rooted in self-assessment. According to Piaget's theory, children learn by actively interacting with their environment and combining new information with previous experiences (Alanazi, 2016). This is consistent with self-assessment, as it allows young learners to make meaning from their experiences, monitor their own progress, and adapt their learning strategies.

Vygotsky's Zone of Proximal Development (ZPD) also emphasizes the role of scaffolding, which is the progression from what students can do independently to what they can do with guidance (Butler & Lee, 2010). As a scaffolding tool in the context of literacy development, self-assessment helps children become more aware of their progress and gradually become more independent in learning.

Moreover, self-assessment improves metacognition, which allows learners to think about what they know, ask relevant questions, and develop critical thinking (Scott, 2017). According to Rezaei (2011), self-assessment enhances reflective practices in language learning and enables students to have a better understanding of their strengths and weaknesses (Brown & Harris, 2014).

**Understanding Self-Assessment in Early Childhood Education**

A formative assessment strategy, self-assessment encourages learners to assess their own progress, reflect on their understanding, and identify areas for improvement (McMillan, 2012). Self-assessment is often used interchangeably with terms like self-evaluation, self-reflection, and self-monitoring, all of which highlight the learner's active role in evaluating their own learning (Herrera et al., 2022). But self-assessment is not just about determining achievement; it is a process-oriented approach that allows students to track their progress, improve their learning strategies and develop confidence in their academic abilities.

Self-assessment is very important in early childhood education, in literacy development especially in letter recognition. Structured self-assessment activities help young learners to understand their strengths and weaknesses and develop the foundational skills necessary for reading and writing. Since early literacy is based on a child's ability to recognize letters, identify their sounds, and make connections between spoken and written language, self-assessment allows students to take an active role in their learning journey (Slavin, 2014).

**Benefits of Self-Assessment in Early Literacy Development**

Self-assessment promotes active participation as students take ownership of their learning and their academic progress (Slavin, 2014). According to research, self assessment has a positive effect on student motivation and engagement because it enables learners to monitor their progress and celebrate small achievements (Jamrus, 2019). Integrating self-assessment strategies into literacy instruction makes children more invested in learning, which results in more focus, persistence, and confidence (White, 2021).

Self-assessment is one of the key advantages in developing self-regulated learning. Children become more aware of their learning strengths and challenges as they assess their progress, and can adjust their strategies accordingly (James, 2012). This process encourages independent learning habits, decreasing their dependence on teacher feedback and encouraging autonomous decision making in learning (Brown & Harris, 2014).

Not only is self-assessment beneficial for academic development, but it also supports cognitive, social and emotional growth. It helps learners to reflect on their thinking, to articulate their progress and to engage in meaningful discussions about their learning (Miller, 2003). Moreover, self assessment also reduces anxiety associated with teacher led evaluations as students become confident in assessing their own progress without fear of external judgment (Brown & Harris, 2014).

**Practical Strategies for Implementing Self-Assessment**

In order to make the most of self-assessment in early childhood education, assessment tools should be engaging and developmentally appropriate. The star rating system is one effective method, where students rate their performance by coloring stars according to how independently they completed a task. Likewise, emoji based self-assessments are a visual and intuitive way for young learners to express their understanding (Andrade & Valtcheva, 2009).

Additionally, bcause young learners need structured support, teachers are important in modeling self-assessment strategies and guiding students on how to assess progress. Educators can integrate verbal reflections, checklists, and guided self-assessment activities to help children develop the skills to assess their learning independently (Kumar et al., 2023).

Self-assessment is not only about literacy development, but also about 21st century learning skills like critical thinking, collaboration and self-directed learning. Peer discussions and reflective learning practices encourage students to develop a deeper understanding of their progress and promote cooperative learning and emotional intelligence (Scott, 2017).

**METHODOLOGY**

**Research Design**

This action research adopts a qualitative research design to explore the role of self-assessment in developing letter recognition skills in early childhood education. Qualitative approach helps to understand students' learning experiences, engagement and self-reflection in classroom settings (Kothari, 2014). The study captures descriptive data through observations, artifacts, and interviews that highlight patterns, behaviors, and perspectives on self-assessment in literacy learning (Pandey, 2021). To examine real world classroom interactions and provide context specific insights into how young learners engage with self-assessment, a case study methodology was chosen (Merriam, 2009). Since the research is not about measuring numerical outcomes but understanding student experiences, qualitative inquiry is the most appropriate approach.

**Participants**

The study was carried out in a government kindergarten in Sharjah, UAE, with students aged 4–6, whose first language is Arabic. During circle time, students participated in whole group self-assessment activities and then focused small group sessions with an English teacher. The study was conducted in two phases: a six-week initial period and an eight-week observation period to monitor progress and engagement in self-assessment. The research was supported by the UAE Ministry of Education, which included self-assessment in early literacy instruction and teacher training for implementation.

**Data Collection Tools**

A multi-method qualitative approach was used to ensure a rich, detailed exploration of students' experiences with self-assessment.

**Classroom Observation**

Firsthand observations of student engagement with self-assessment strategies offered firsthand insights into student behaviors, interactions, and expressions of understanding (Tilstone, 2013). To document how students responded to self-assessment tasks, their level of independence in evaluating their learning, and their ability to recognize letters through reflective practices, a structured observation sheet was used. Changes in student engagement were tracked through classroom observations and evidence was provided of how self-assessment impacted their literacy development over time.

**Artifacts**

Student self-assessment sheets, drawings, writing samples and classroom activities were analyzed to track progress in letter recognition and self-reflective skills (Heale & Twycross, 2015). These artifacts offered concrete evidence of students' engagement, and how they assessed their own learning through visuals and written reflections. Qualitative analysis of these materials provided a better understanding of how self-assessment supported letter recognition and literacy growth.

**Interview**

The classroom teacher was interviewed using a semi structured interview to explore their experiences, perceptions and challenges in implementing self-assessment (Goundar, 2012). The interview addressed the teacher's role in facilitating self-assessment, observed changes in student engagement and letter recognition, and the difficulties in implementing self-assessment strategies in early childhood classrooms. The teacher's insights provided contextual information that was useful in interpreting classroom observations and student artifacts.

**Letter Recognition Activities**

To incorporate self-assessment into daily learning, letter recognition activities were designed to use tools such as star ratings and emotion-based reflections adopted from PAAI. (Goto Butler & Lee, 2010). These activities allowed students to recognize letters, connect them to sounds, and think about what they knew. Students were able to develop a greater awareness of their progress, challenges, and achievements in literacy development through self-assessment while doing letter recognition tasks (Jamrus & Razali, 2019).

**RESULTS**

**The Effect of Self-Assessment on Students' Letter Recognition Abilities**

The first research question was to investigate the effect of self-assessment on students' letter recognition skills. The study showed that self-assessment greatly facilitated the ability of students to identify, pronounce and write letters. At first, students had difficulty with self-assessment because they were not familiar with the concept and needed constant teacher support to complete the process correctly. For example, some students color all stars in the rating system or happily press the happy emoji without thinking about their actual performance in the first place, which indicates that they still do not understand the self-assessment process.

This was done in an attempt to integrate self-assessment into all classroom activities and integrate it into every lesson I taught so that as assessment was a prominent part of the lesson the students were better able to judge their own growth and learning and able to understand where and what they still have to improve in more accurately. Through time, they learned to better recognize their strengths and weaknesses in literacy activities. Students who were actively engaged during self-assessment in the classroom were better able to recognize and differentiate between uppercase and lowercase letters. Moreover, the collection of artifacts from student work showed that there was a striking progression in their letter recognition as letter identification and phonemic awareness were much more accurate as the time passed (Andrade & Valtcheva, 2009).

This finding was confirmed through teacher interviews, in which educators stated that regular use of self-assessment made students more confident in their literacy abilities. In addition, they were more motivated and enthusiastic in classroom activities, especially when using interactive self-assessment

tools. Findings indicate that self-assessment tools that use stars, emotional emoji, etc. adopted from PAAI, promote accessibility and engagement for early learners because of the tools' visual and interactive nature. Further, the responses from the teacher indicated that students using self-assessment tended to be more aware of their own learning, becoming less dependent on teacher for literacy development

This was also confirmed by parental surveys as the parents of many children observed them to become more able to recognize letters at home. Parents reported that students who evaluated themselves were more apt to practice letter recognition at home than those who did not practice it because students assessed themselves and knew where they were in the learning process and where they could improve. These findings do demonstrate that self-assessment is effective both for enhancing letter recognition skills in the classroom, and as an independent learning habit in non-classroom situations (Jamrus & Razali, 2019).

**Self-Assessment Strategies in Early Childhood Classrooms**

The second research question was to determine the most effective self-assessment strategies for early childhood learners. The first two self-assessment strategies used in the study were the star rating system and emotional emoji reflections.

Observations within the classroom showed that the students considered the star rating system to be more intuitive and engaging than the assessment conducted using emojis. Students were already familiar with stars as a form of reward system, so they were able to understand the self-assessment process. The letter recognition activities were graded with the star system – students assessed their performance in recognition activities by recognizing what they were able to do independently and what tasks they needed teacher assistance with.

However, the emotional emoji system turned out to be initially difficult, as some students found it quite hard to identify relations between their emotions and their learning progress. For younger learners, they needed verbal explanations and repetition of how to correctly use the emoji system. However, over the course of the study, students became more at ease using emojis to represent the degree to which they understood the material, a phenomenon that showed that visual and affective cues were effective at aiding in self-reflection (Goto Butler & Lee, 2010).

The combination of multiple self-assessment strategies was found to be the most effective through teacher interviews and checklists. Incorporating self-assessment with oral questioning in conjunction with peer discussions and the support of the teacher proved most useful to students. In line with the previous research (Brown & Harris, 2013), the finding is consistent with the fact that scaffolding experiences across multiple sensory and cognitive modalities are necessary for young children to acquire the skills of self-assessment.

**Challenges of Incorporating Self-Assessment into English Literacy Classrooms**

The third research question explored the challenges of implementing self-assessment in early childhood English literacy classrooms. The main challenge that was observed was that students had short attention spans and were unable to consistently engage in self-assessment. The students rushed through the self-assessment tasks to a degree without true reflection, and this needed a lot of teacher modeling and reinforcement initially during the first study. This result is consistent with research that indicates that guidance is needed to teach young learners to regulate themselves (Brown & Harris, 2014).

A second major challenge was students' developmental readiness for self-assessment. Other students did not know the difference between doing an activity and self-assessing their learning. Students at lower academic levels needed much more direct teacher support and scaffolding to meaningfully engage in self-

assessment. Structured teacher support, however, reinforced over time the value of developing strengths and areas for improvement in these students (Andrade & Valtcheva, 2009), as teacher interviews confirmed these students' onset of the ability to recognize their strengths and areas for improvement in the potential for development.

Psychological factors also influenced students' ability to self-assess accurately. However, some students were hesitant to rate themselves honestly because they equate lower self-rates with failure or with something the teacher will feel negative about. Some were reluctant to make their self-assessment decisions without teacher validation. These findings are consistent with previous research that suggests that young learners may have difficulty with self-assessment because they rely on external validation (Rolheiser & Ross, 2001).

Another factor that influenced the effectiveness of self-assessment was parental involvement. Some parents were unsure how to support self-assessment at home as they were not familiar with the process. Parents who were actively involved in their children's self-assessment activities, however, reported positive changes in their child's motivation and confidence in literacy skills (Jafarov, 2015).

It also provides the avenue for teacher feedback to acknowledge that professional development or training is needed in order to be able to implement self -assessment strategies. Initially, some teachers found it difficult to incorporate self-assessment into literacy instruction because it took extra time and necessitated changes to the existing lesson structures. During the later stages of the study, however, teachers noticed that students seem to get used to self-assessment routines and this made the process a smoother integration into daily instruction (Goldhaber et al., 2020).

## DISCUSSION AND CONCLUSION

### The Effect of Self-Assessment on Students' Letter Recognition Abilities

The main purpose of this study was to investigate how self-assessment can be used as an effective strategy to improve letter recognition among early childhood students. The findings showed that the self-assessment plays an important role for students to identify, distinguish and recall letters when they reflect and engage with their own learning in a structured way. The study also showed that self-assessment helped learners develop a form of basic literacy skills such as listening (to distinguish letter sounds), speaking (to pronounce the letter), reading (to identify different letters) and writing (to construct the letter correctly). These results are in line with previous research showing the importance of self-assessment in enhancing students' metacognitive awareness and academic performance (Andrade & Valtcheva, 2009). During the study, various self-assessment strategies were incorporated into daily classroom activities such as interactive English literacy lessons, educational games, physical activities, writing exercises, and reading tasks. It also facilitated periodic self-assessment after each activity allowing students the opportunity to critically analyze their level of learning, as well as, identifying both their strengths as well as where their needs for improvement. Learners who practiced frequent self-assessment observed student artifacts and were observed to have a more heightened awareness of their learning goals and more independence in their literacy development. These findings coincide with the research stating that self-assessment leads with responsibility and self-regulation in developing the reasoners in young learners (Brown & Harris, 2013).

### Self-Assessment Strategies in Early Childhood Classrooms

Learnings from the study include the benefits of visual and interactive self-assessment tools: primarily in the use of the star rating system and emotional emoji reflections borrowed from PAAI. All of these are

developmentally appropriate methods because they allow students concretely and visually to evaluate their learning. Students initially did not understand the purpose of self-assessment but with further exposure and teacher guidance developed a more accurate self-reflective skill. The study showed that adding self-evaluation to other teaching strategies, like oral questioning, peer discussions, and guided teacher feedback was especially helpful to their development of more accurate self-evaluations. The tracking of time spent on this aspect of the assessment again supports the existing literature of the need for scaffolded, self-assessment experiences to be effective for children, and that the process must integrate several cognitive and sensory modalities (Goto Butler & Lee, 2010).

**Challenges of Incorporating Self-Assessment into English Literacy Classrooms**

The study revealed that though the integration of self-assessment into ECL instruction is effective, there are several challenges and obstacles facing it. A major issue was that students had very short attention spans and could not invest in a self-assessment process. During the implementation of this process in its earlier phase, students often rushed through self-assessment activities with little or no genuine reflection and modelled and reinforced by teachers. This result is consistent with research showing that young learners require formal guidance to improve in self-regulation (Brown & Harris, 2014). A second challenge was students' developmental readiness for self-assessment. The first problem was that lots of participants initially could not tell between assessing their learning and just doing the task. Young students held the view that self-assessment is easier and more beneficial if they have some teacher support and also some structured guidance from the teacher. However, as implementation continued, students started displaying the ability to identify their strengths and weaknesses as well as the part that required improvement, thus emphasizing the significance of teacher scaffolding and continuous feedback in early childhood assessment (Andrade & Valtcheva, 2009). Psychological factors also affected the effectiveness of self-assessment. Still, some students were reluctant to rate themselves lower, as it had the implication of failure or feedback from the teacher that one was not doing well. Some depended on teacher validation before making decisions about self-assessment. This supports previous research that young learners may have difficulty with self-assessment because they rely on external validation (Rolheiser & Ross, 2001). Therefore, teachers normalized self-assessment as a growth tool, not a judgement tool, enabling students to more comfortably utilize self-assessment to check on their learning progress. Self-assessment effectiveness was also influenced by parental involvement. However, some parents might also not be aware of how to support self-assessment at home, based on surveys. However, those who were more involved in their children's self-assessment tasks were more confident and motivated in literacy learning. This supports previous research that parental support enhances children's self-regulation and metacognitive skills in literacy development (Jafarov, 2015).

**Limitations and Implications**

This study highlights the potential of self-assessment strategies to support early literacy development in young learners, particularly in enhancing letter recognition skills. The findings suggest that integrating simple, visual, and interactive self-assessment tools can increase students' motivation, confidence, and autonomy in learning, while also encouraging teachers to adopt more reflective and student-centered practices. These results have broader implications for teacher education and professional development, as they emphasize the importance of preparing educators to effectively implement self-assessment strategies in early childhood classrooms. At the policy level, the study contributes to ongoing discussions about embedding formative assessment approaches within national literacy initiatives.

The research was conducted in a single school context, which limits the generalizability of the findings. While the in-depth case study design offers rich and detailed insights into the experiences of young learners and teachers, it may not fully represent the diversity of early childhood settings across the UAE or beyond. Future research should extend this work across multiple schools, regions, and learner populations to validate and expand upon these conclusions, thereby strengthening the evidence base for broader application.

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