

Children's drawings: An expression of academic knowledge in kindergarten?

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Abstract

Children represent and communicate their learning through multiple modalities, yet assessment of academic learning is often restricted to methods that necessitate formal writing ability. To intervene on this issue, empirically validated measures such as the Early Print Task and Drawing Task, will demonstrate how children's drawings can be utilized to communicate academic knowledge, thereby providing young children with greater accessibility to share their learning. Implications offer possible solutions to the limitations of classroom assessment practice, by exemplifying how educators can access and assess student learning to support the growth of young children's academic knowledge. Guided by multimodal theory and grounded in contemporary kindergarten curriculum, this position paper based on a methodological study poster illustrates how theory can inform practice and the fostering of deeper understandings of child-centered measures of student learning.

Keywords: kindergarten, multimodal theory, emergent writing, children's drawings

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Early years educators are faced with the challenge of accessing and assessing young children's academic learning (Graven, 2012). This challenge can be particularly problematic if children are not ready to complete formal academic assessments, traditionally measured through numeracy, reading, and writing tasks (Dockrell & Marshall, 2015; McClelland et al., 2014). While the extant literature provides a strong understanding of conventional academic ability, it may simultaneously impose limitations on the ways in which young children communicate their knowledge, and in turn, the ways in which educators assess that knowledge. Therefore, the objective of the present methodological study is to respond to this issue by providing greater accessibility for young children to communicate their learning by demonstrating how children's drawings can be used as an expression of academic knowledge in kindergarten.

Supported by multimodal theory, children communicate and represent their learning through multiple modalities, including visual, auditory, verbal, movement, gesture, play, and various print symbols (Dyson, 2003; Kress, 2003; Peterson, Eisazadeh, Rajendram, & Portier, 2018). When specifically considering the expression of knowledge through print symbols, classroom assessments practices often focus on children's conventional sentence writing as a method for communicating academic knowledge (Kohnen, Nickels, & Castles, 2009). While some young learners have yet to master conventional writing techniques, they are still capable of

representing their academic knowledge through other forms of print symbols, such as drawings (Anning, 2004; Wu, 2009).

Yang and Noel (2006) propose that emergent writing and drawing are functionally similar in nature, as both skills operate as a representational communicative system. Akin to writing, drawing serves the same purpose of communication, as drawings pictorially represent meaning that can be understood by another (Mackenzie & Versesov, 2013; Peterson, 2015; Uddin, 2016).

To measure children's drawings as an expression of academic knowledge and to intervene on the current issue of limited ways to assess children's multimodal learning, empirically validated measures, such as the Early Print Task (Pelletier & Lasenby, 2007) and the Drawing Task (Pelletier, 2016) can be used. In the Early Print Task, children are verbally told a sentence which they are asked to record on paper (see Figure 1). Responses are assessed in regard to children's drawings as representations, phonetics, conventional spelling, number, and colour use. Of interest is the inclusion of drawings in the coding of this task, as children are credited for representing the sentence through drawings. For a full description of the coding scheme of the Early Print Task, see Pelletier and Lasenby (2007). To further assess children's drawings as representations of knowledge, the Drawing Task can be used. In this task, children are given an open-ended drawing directive (see Figure 2) and asked to explain their drawing, which is recorded verbatim and referred to as the narrative. This narrative is an essential part of the children's drawing as it provides opportunity to share additional meaning (Topping, Sung, & Mullick, 2009) and incorporates children's verbal modality of communication (Falchi, Axelrod, & Genishi, 2014). The responses are coded for relevance, to assess the extent to which the meaning of the drawing (i.e. the narrative) corresponds to the pictorial representation (i.e. the drawing itself). For a detailed description of the coding scheme for the Drawing Task see Pelletier (2016). Taken together, the Early Print Task and the Drawing Task can be used to measure children's drawings as an expression of academic knowledge in kindergarten.

In the classroom, assessing children's drawings as representation of academic knowledge presents three solutions to the current problem of limited ways to assess children's multimodal learning. Primarily, acknowledging that children's drawings communicate meaning, in the same way conventional writing does (Yang & Noel, 2006), helps to remove limitations on the ways in which children can express their knowledge and thereby provides greater accessibility to assess their learning. Secondly, children's drawings and their accompanying narrative provide children with multiple modalities to express their learning as it incorporates both verbal and print symbols of communication (Falchi et al., 2014). Lastly, drawings as a system for expressing academic knowledge is not bound to a single academic domain (i.e. literacy) and can be used to express academic knowledge across multiple subject areas (i.e. numeracy) (Ontario Ministry of Education, 2016), therefore expression of academic knowledge is not limited by young children's still-developing literacy skills. In conclusion, children's drawings can be used to communicate academic learning in kindergarten to capitalize on children's multimodal expression of knowledge in order to help educators understand, assess, and support early academic knowledge of kindergarten students.

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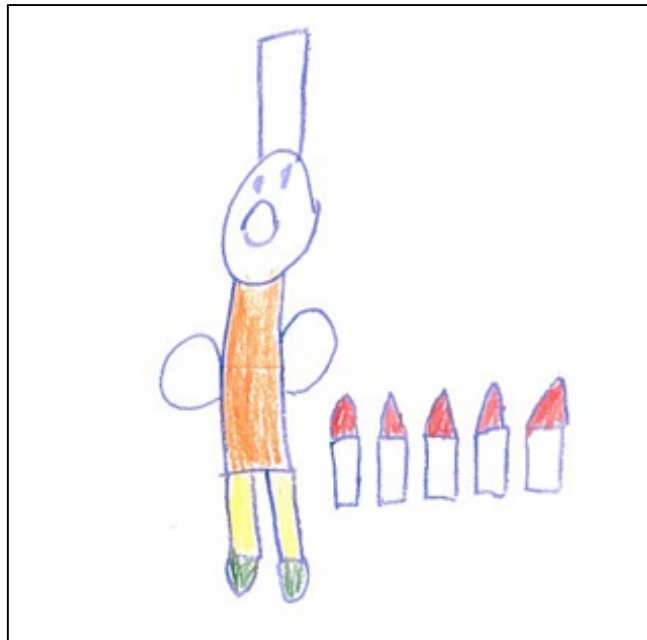
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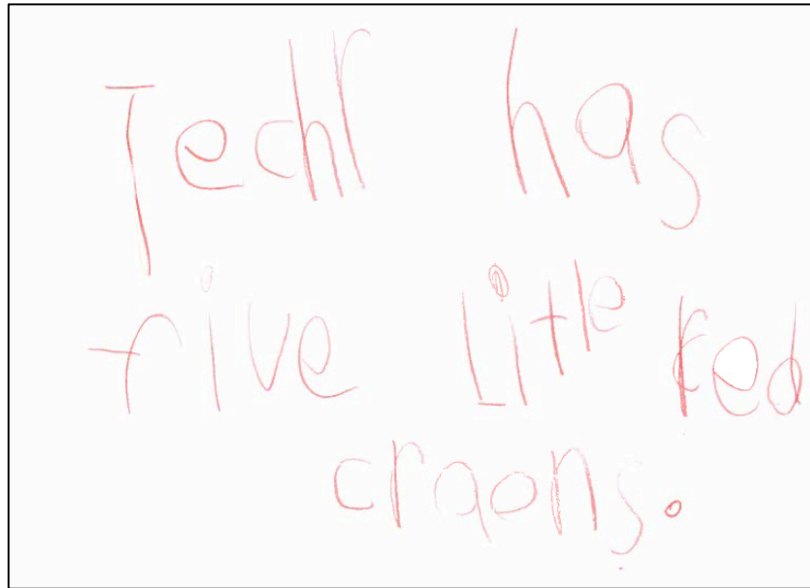
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Appendix A: Figures

Figure 1. Examples of children's responses to the Early Print Task (Pelletier & Lasenby, 2007).
Example 1

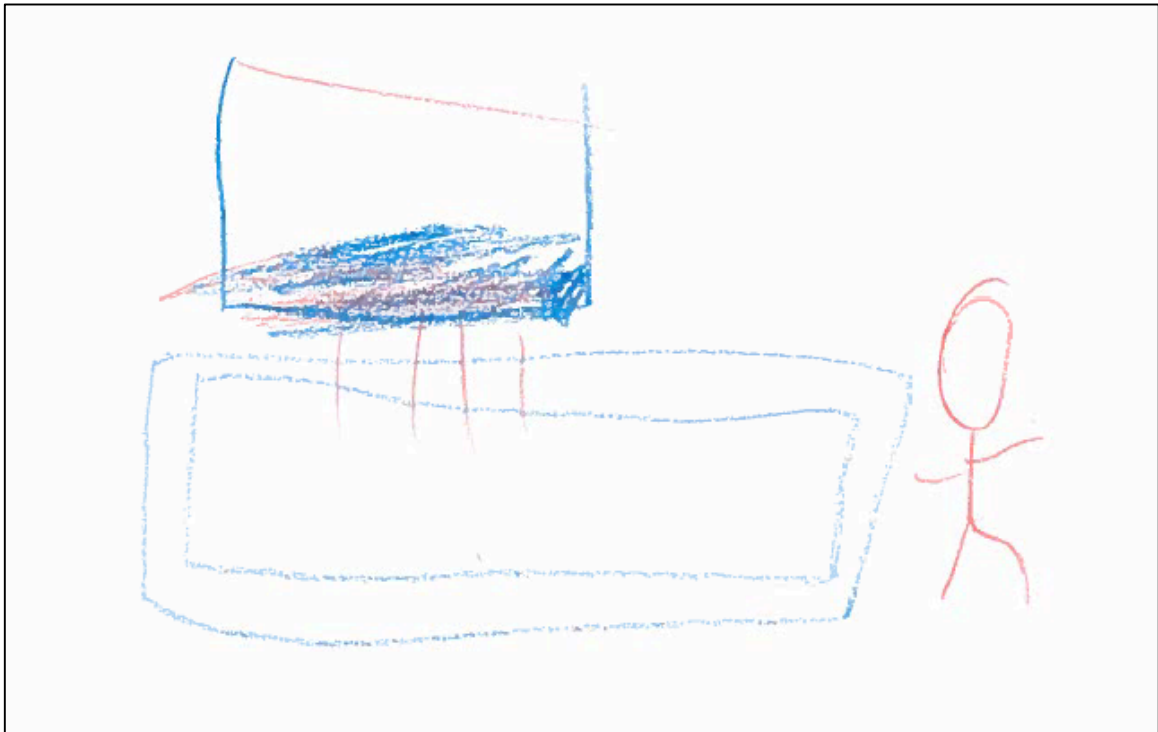


Example 2



Note: During the Early Print Task (Pelletier & Lasenby, 2007), children were asked to write the following sentence, “*Teacher has five little red crayons.*” Children’s responses ranged from drawings to conventional sentences.

Figure 2. An example of a child’s response to the Drawing Task (Pelletier, 2016).



Narrative

“This is me, the boat, and water table. The water is going in the boat. When I put paper inside the boat it is still going in because these are holes.”

Note: During the Drawing Task (Pelletier, 2016), children were asked to “*Draw a picture of yourself doing something at school*”. The child’s verbal narrative was recorded verbatim and is displayed below the drawing.

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Author Biography

Hanna Wickstrom is a doctoral student in Developmental Psychology and Education at the University of Toronto and a former elementary teacher. Her research focuses on children’s cognitive and academic development in the early years, with an emphasis on how young children learn mathematics, particularly in the context of play-based learning. She may be reached: hanna.wickstrom@mail.utoronto.ca