Scaffolding: Integrating social and cognitive perspectives on children's learning at home

Editorial by Nicola Yuill & Amanda Carr (Special Issue Editors)

Since the translation and cultural assimilation of Vygotsky's (1978) ideas into the English-speaking academic community from the 1970s, through thinkers such as Wertsch (1984), Vygotsky's ideas continue to have a powerful influence in psychology and education, as well as being enthusiastically appropriated in other fields such as technology-mediated education (Luckin, 2003). As academics working across these disciplines, we felt the time was right to reflect on the use of socio-cultural theory, and the concept of scaffolding in particular, in understanding parent-child tutoring interactions at home, with reference to children's academic achievement at school. Thanks to funding from the British Psychological Society, we ran a series of three seminars, and this Special Issue arises from questions raised there.

We were lucky enough to have David Wood open the series as our keynote speaker in Seminar 1: *Conceptualisations of scaffolding*: *theory and methods* (see scaffoldingseminars.co.uk). He reminded us of the roots of the idea in the classical paper, Wood, Bruner and Ross (1976), which has over 9000 citations on Google Scholar, and discussed its essential features of contingency, fading and transfer of responsibility. Perhaps surprisingly, there has never been a single agreed method of measuring scaffolding. This could seem to be a disadvantage, but looking at how the papers in this issue measure scaffolding in different ways, it is clear that authors manage to adapt measures to suit the questions being answered, and commonalities are clear enough to enable comparisons across studies despite the different means of measurement. For example, analysing video data, **Sorariutta & Silven** focus on rating scales of scaffolding and autonomy support, while **Lee, Baker and Whitebread** measure contingency and intrusiveness: these are different but related aspects of scaffolding. **Tzuriel & Shomron** use the Mediated Learning Experience (MLE) approach with its associated measurement method of Observation of Mediation of Interaction (OMI), explaining its links to the traditional concept of scaffolding. **Leith, Yuill & Pike** re-visit the early literature on scaffolding and explicitly compare methods of visualising individual data across time, compared to averaged data over the course of a problem-solving session and across dyads, while **Yuill & Little** present a descriptive analysis of conversation transcripts to illustrate the very specific ways in which mothers support children's understanding about the causes of emotion.

 Issues of measurement are also central to the paper by **Hughes, White, Foley & Devine**, who focus on how to assess family support in relation to school readiness. Fortunately for researchers, their BESSI scale shows measurement invariance over time and sensitivity to child outcomes, supporting its use as a quick means of gathering teacher ratings to understand factors in children's early education and readiness for school.

Our second seminar, similarly inspired by Vygotsky's contribution to current thinking, focused on the role of context –both the issue of setting, home and school, but also the broader culture. Here we think the special issue excels in the range of contexts studied and the discussion of how context shapes interactions. There are papers looking at education and child development in England, Finland, Germany, Israel, Italy and South Korea, and populations include families across a wide socio-economic range (e,g, Hughes et al., Gartner et al.), pre-term toddlers (Gartner et al), learning-disabled boys (Tzuriel & Shomron) and children with language difficulties (Yuill & Little). **Sorariutta & Silven** in particular focus on context, most notably comparing patterns of cognitive guidance from both parents on pre-mathematical development, and finding different patterns in mothers' and fathers' roles in spatial understanding development, but more similar patterns for numerical development. The discussion in this paper provides a highly nuanced set of ideas about how amount

of early childcare, differential interactions with mothers and fathers and parent education might all influence children's early academic development. This and the paper by **Hughes et al.** are particularly strong in discussing the possible implications for educational policy and practice.

Implications for intervention are addressed directly by two papers involving scaffolding interventions for parents. Combining their results suggests interesting implications for training studies. **Gaertner, Vetter, Schaeferling, Reuner & Hertel** showed that a scaffolding intervention increased parents' own beliefs in the role of co-regulation in supporting children's developing self-regulation. The data did not address whether these parental beliefs translate into action, but **Moe, Katz & Alesi**, in their intervention study, showed that changing parental attitudes about autonomy support and motivation did influence children's own motivations, suggesting that parental training should address both parent understanding about scaffolding and affective and motivational factors in parental support for children's homework.

Our third seminar addressed the role of emotion and mental state understanding. **Yuill & Little** address this issue directly, drawing on the literature about mental state talk, an area of psychology that has drawn very fruitfully on ideas about scaffolding (e.g. Taumoepeaue & Ruffman, 2008). The paper by **Tzuriel & Shomron** provides a further extension into the area of child psychological resilience: such resilience was predicted, in their study, by learning-disabled Israeli boys' experiences of mediated learning with their mothers, showing the importance of developing self-regulation. The role of context remains crucial here: **Lee et al.** show that patterns of developing self-regulation, measured in terms of children's' executive function, are different in South Korean dyads from patterns reported in Western literature, and their discussion addresses universal and culture-specific patterns of influence on children's self-regulation.

Reflecting on the issue as a whole has shown us that scaffolding still remains a powerful construct in the literature over the past 40 years (Mermelshtine, 2017), and that it has not fallen foul of fruitless debates about definitions or methods of measurement, despite a lack of single agreed ways of measuring scaffolding. Could this mean, as Wertsch warned of the zone of proximal development, that "itwill be used loosely and indiscriminately, thereby becoming so amorphous that it loses all explanatory power" (p. 7)? We think that these papers provide nuanced discussions of the different mechanisms through which factors such as cultural norms of parenting, school systems, gender-mediated parental roles, socio-economic status, and individual factors such as motivation, home environment and parental beliefs, result in specific hypotheses about how these factors make scaffolding play out in different ways. Such discussions help us to understand how home interaction can support better educational experiences for children, and shows how this research can influence policies in early education and family support.

References

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