

Editorial

Teachers and the developing mind of the individual child

When babies are born, they enter the world as individual beings and start learning and acting with their individual capacities and innate abilities, including what Elizabeth Spelke, Susan Carey and other developmental psychologists and neuroscientists, such as Stanislas Dehaene, refer to as 'core knowledge'. Of course, since the moment of birth (some say pre-birth), an infant develops in some social interaction. This increases incrementally, especially when language is established as a tool to appropriate and help systemize knowledge and as a main form of communication. When a child reaches school age, she has already been socialised in the ways of the family and the community, using its language(s) and adhering to its cultural customs.

So, when children enter school, they use the tools that they have assembled in early childhood and use their experiences to learn more tools and gain more experiences, with the help of teachers. Yet, the young child who enters school is still an individual human being, much as he or she lives and learns socioculturally.

Some researchers wish to investigate children as sociocultural beings, emphasising how the environment shapes the individual. Lev Vygotsky theorised some of this learning; we are still holding on to his ideas in the 21st century. One of his ideas was that signs and symbols mediate human activity, such as learning. He theorised, quite extensively, about language as placeholder for the development of concepts (Vygotsky 1986). It may surprise some radical socioculturalists that a developmental cognitive psychologist, Susan Carey (2009), says something similar: young children may learn words and cultural signs (such as counting strings or speech forms) before they understand the concepts that words refer to. However, Carey (*ibid*) and Chris Donlan (2015) say that language, as mediator, serves as placeholder for later conceptual development. Carey and Donlan are researchers who investigate children as individual beings, who learn and develop socioculturally. I would argue that, had they been contemporaries of Lev Vygotsky, they may have shared a research laboratory to get to know the mind of the developing child. Their perspectives do not differ much.

Leading article: Working memory and teacher knowledge

Volume 5(1) of our journal includes articles that exemplify such perspectives of individual children in sociocultural settings where teachers and other guides assist them. In the leading article, in which *working memory* is discussed, psychologist Kate Cockcroft writes for teachers and other caregivers of children. This article fills a gap in the South African educational research literature. Especially in the teacher education literature, there is far too little research (empirical or otherwise) on what many regard should be part of basic, general teacher knowledge: knowing contemporary theories of learning, conceptual change, conceptual development, and basic brain anatomy and physiology.

For instance, if teachers do not know much about working memory as first input analyzer of information, they are likely to flood this perceptual and cognitive mechanism with i) too much teacher talk; ii) weakened lesson and syllabus planning with mixed information; iii) assessment practices that may be less than optimal; and, most importantly, iv) judgements of young learners who appear not to listen to instructions, or who find it hard to pay attention. In many textbooks, and especially on some popular Internet sites too, student teachers read about popular topics and theories, such as the 'stages of cognitive development', 'multiple intelligences', 'learning styles' and, to my mind, one of the most misunderstood ideas, namely 'constructivism'. The students I encounter seldom distinguish between the linguistic and conceptual categories of these theories and indulge in popular versions, using catch phrases.

So, when one reads Cockcroft's article, with its very clear psychological focus on what an individual child can do with information, not much convincing is required to believe that teachers need this knowledge. I would hope that this article becomes standard, prescribed reading, especially in the undergraduate years of teacher education.

In current sociocultural studies in education, much attention is given to sociocultural aspects of learning (and teaching). But in all of these, learning outcomes of individual learners are what counts. And my argument is that not enough research attention is given to children as *individuals* in childhood education.

While some critics see approaches such as Cockcroft's as too 'cognitive', reductionist or even 'positivist' (sic!), they fail to realise that it is a complementary, rather than an oppositional, approach to a sociocultural paradigm for understanding child development and learning. Cockcroft's suggestions can be located neatly within a sociocultural perspective, as they focus on the cognitive tools or skills that teachers or knowledgeable others can mediate to children to ensure that they are well equipped to engage with the world as active learners.

While working memory difficulties are a feature of many developmental difficulties, strategies that support and strengthen working memory are likely to not only benefit children who are struggling with such difficulties, but typically developing children as well. Early childhood and the early grades in school are a key point at which such support can be provided, because the use of ineffective tools or failure to develop appropriate tools during this period can have long-term effects on subsequent learning and development. Difficulties with working memory can be addressed, but this needs to happen as early as possible for maximum effectiveness.

Learning difficulties

Other articles in this issue focus on specific problems that young children encounter as a result of inherited traits, and how these unfold in their experience of their environment. Wium points out how teachers and speech-language therapists can collaborate to assist children optimally; while Van Biljon reports on an investigation on children with autism spectrum diagnosis and how parent demographics have been a variable that has changed early diagnosis.

Reception year

Early grades learning has become a focal point in South Africa, and the all-important Grade R (reception) year in public schools is being researched quite vigorously. I would hope that this preparation year will not be seen as ‘the new Grade 1’. Schäfer and Wilmot argue that learning about shape and space in Grade R can be promoted through visual art; while Cloete and Delport investigated Grade R teachers and found that teachers learn to utilise music competently in their teaching when coached in a participatory way. Van Rensburg reports on a study that showed that 114 Grade R learners were not ready for school at the end of the reception year, begging the question of what the real purpose of the reception year is and reminding one of Van der Berg, Girdwood, Sheperd et al’s (2014) damning report on Grade R, which showed how privileged children benefit much more than others in Grade R – the ‘Matthew effect’. Obed and Newman discuss the ECD policy in Nigeria, highlighting that many of the areas of concern in South Africa are also topical issues in that country, such as that children’s social and cultural lives should be used as a resource for literacy learning.

Foundation phase teachers

This journal receives a substantial number of manuscripts that report on foundation phase teachers. Three of them are published in this issue. Kanjee and Mthembu conducted a study on foundation phase teachers’ knowledge of assessment, referring to this competence as ‘assessment literacy’. Bertram and co-authors reflect on the complexity of foundation phase teachers’ knowledge base; while Brown and co-authors report on a successful development programme for foundation phase teachers, arguing that “the programme’s strong orientation to practice, its focus on teachers’ understanding of children, and the model of teacher professional development that is located in reflexive practice together may have enabled positive changes in the teachers’ practices” (article 10).

Koda

In the last article, Loukomies and her co-authors make a case for theoretical knowledge about learners’ motivation and interests as a basis for pre-service teachers’ practicum mentoring. It is a good koda to this issue of the journal, where much of the focus is on teachers. To ensure a competent pool of teachers in the primary school, the work begins with pre-service teacher education that includes an understanding of the driving theories in child development and learning, along with a good dose of practical wisdom.

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