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The mind is not a black box: Children's ideas about the writing process

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Abstract

We studied children's conceptions of the writing process while the complex cognitive activity of writing is carried out through a pictorial representation of the writing process. Sixty children attending Kindergarten, first grade and fourth grade in Bariloche, Argentina, were presented individually with a sequence of four questions about the content of a child's thought at four key moments of writing production (anticipating, writing, revising, rereading), which were depicted on picture cards. Textual analysis, the application of Simple Correspondence Factorial Analysis (SCFA) and Modal Response procedures, indicated significant developmental changes in the focus of children's ideas about writing. More specifically, we looked at children's conceptions of the nature of thinking while writing, given cognitive processes of increasing complexity and internalization. Main educational implications indicate the need to rethink practices for teaching writing at initial and primary school levels in order to promote teaching interventions directed at getting pupils to be explicit, revise and redescribe their conceptions about the writing process. We suggest that learners' conceptions of writing processes outline a tacit learning curriculum of writing, which operates by guiding learning efforts and self-evaluation standards.

Keywords: Child development; Writing acquisition; Theory of mind; Thinking; Conceptual change

1. Introduction

This work studies children's conceptions about the writing process at four key moments of writing production: before writing, and during writing, revising and rereading. We propose that what children know about the writing process can provide novel access to the understanding of the development of children's conceptions about two relevant cognitive activities: writing and thinking. Although the cognitive and sociocognitive processes occurring during writing production have received much attention from developmental and educational researchers (Bereiter & Scardamalia, 1987; Dyson, 1989; Flower & Hayes, 1981; Nystrand, 1982; Tynjala, Mason, & Lonka, 2001; Scardamalia & Bereiter, 1991), little is known about how children who are learning to write conceive of these processes. Nowadays, there is

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growing agreement about the relevance and urgency of achieving better understanding of the learners' views of the activities that are the core of school education (Olson & Bruner, 1996), as writing undoubtedly is. We suggest that learners' conceptions of writing processes outline a tacit learning curriculum of writing, which operates by guiding learning efforts and self-evaluation standards.

As is well known, thinking constitutes an inherently private and invisible cognitive activity that involves a multiplicity of specific mental processes (Vygotsky, 1978) requiring some sort of mental contact with some content. Such content can consist of perceived, recollected, anticipated, imagined, or even fictional objects. From a slightly different stance, objects of thought can be located on different points of a continuum extending from an external, objective or material pole, to an internal, subjective or symbolic one. In other words, objects of thought can correspond to any branch of the "ontological tree" (Chi, Slotta, & Leeuw, 1994). That is, one can think about objects that are clearly distinct from oneself, as is the case of physical "things" or of other people; or about subtle and slippery objects such as words, events or situations; or even about objects that can be only indirectly acceded to, such as mental representations or even mental processes. It is especially interesting to analyse how children conceive of thought processes occurring during internal or external cognitive activities such as learning (Pramling, 1996), drawing (Scheuer, de la Cruz, & Pozo, 2002) or writing, as is the case of the present study.

1.1. From the psychologists' view of writing to the children's view

It is widely accepted that writing production is a complex, non-linear process that requires and enhances regulatory mental activities, such as planning, monitoring, revision and evaluation (Bereiter & Scardamalia, 1987; Flower & Hayes, 1981; Olson, 1994; Scardamalia & Bereiter, 1991). During the past three decades, many researchers have studied how these processes, which operate recursively in experts' writing production (Jitrik, 2000), develop as learning to be a writer proceeds. Preschoolers already speak spontaneously of what they are thinking about as they write (Goodman, 1996). Many studies have documented that even early writing attempts are regulated by ideas about what may be written in different situations, what characters are to be used and what kind of combinations are allowed for (Baghban, 1990; Ferreiro & Teberosky, 1979; Pontecorvo & Orsolini, 1996). The degree of cognitive control over writing production is influenced by various factors that interact, including cognitive development, specific learning, learners' motivations and goals, educational context for production and revision (Mateos, 2001; Nystrand, 1997).

From an early age, children participate in different notational practices, in an emergent literacy process (Borzone de Manrique, 1994; Sulzby & Barnhart, 1992). Around the age of two or three, children begin to produce poorly-controlled graphic forms. As these forms give way to recognizable figurative drawings, attempts to write names of persons and of objects tend to become distinct as well. By the age of four or five, children become increasingly interested in writing and begin to integrate pertinent production principles (Ferreiro & Teberosky, 1979). Young children use their writing, even when it is not conventional, to mark their drawings, to communicate with others and influence their behaviour, to represent aspects of situations, etc. Despite the precocious distinction between iconic and alphabetical forms (Martí, 1999), children frequently combine both of them in varied ways: writing is used to entitle and identify drawings, and drawing is used to complete writing (Mac Lane, 1993; Sulzby & Barnhart, 1992). It has been found that older children refer to this early relationship between writing and drawing retrospectively. In talking about how they learned to write, most children from ages five to ten anchored the emergence of writing in their earlier practice of drawing (Scheuer, de la Cruz, Huarte, Caíno, & Pozo, 2001).

During the first years of elementary school, as the relative mastery of technical–notational aspects of writing improves (Teberosky & Tolchinsky, 1995), the centrality of drawing as a notational resource generally declines. Mastery of the alphabetical code makes it possible to shift towards new learning foci, including orthographical rules (Matteoda, 2000), conventional formats, and even certain aspects of the intratextual relations of coherence and cohesion (Castedo, 1995; Kaufman, 1994; Teberosky & Tolchinsky, 1995). The stage model of aspects of writing and reading developed by Fitzgerald and Shanahan (2000), mainly agrees with the former account, and completes it developmentally. These authors propose that between nine and 18 years of age, the subject's focus on reading and writing shifts from the learning of new knowledge, to the integration of multiple viewpoints, and successively to the construction and reconstruction of knowledge. This developmental trend matches the well-known transition proposed by Bereiter and Scardamalia (1987), from a knowledge-telling model of writing (according to which writing is a matter of transcribing pre-existing content into text) towards a knowledge-transforming model (writing is a matter of constructing and