

Reactivity of concurrent verbal reporting in second language writing

Chengsong Yang^{a,b}, Guangwei Hu^c, Lawrence Jun Zhang^{b,*}

^a*School of International Studies, Xi'an Jiaotong University, China*

^b*Faculty of Education, University of Auckland, New Zealand*

^c*National Institute of Education, Nanyang Technological University, Singapore*

Abstract

This paper reports an empirical study designed to explore whether concurrent verbal reporting has a reactive effect on the process of second language writing. Ninety-five Chinese EFL learners were randomly assigned to an argumentative writing task under three conditions: metacognitive thinking aloud (MTA), nonmetacognitive thinking aloud (NMTA), and no thinking aloud (NTA), after they completed a similar baseline writing task. Their essays were analyzed in terms of linguistic fluency, complexity, accuracy, and overall quality to examine if there were any significant between-group differences that could be taken as evidence of reactivity. After controlling for baseline differences, analyses revealed no traces of reactivity left on a majority of measures except that: (a) the two think-aloud conditions significantly increased dysfluencies in participants' essays; (b) they also tended to reduce syntactic variety of the essays; and (c) MTA significantly prolonged time on task and retarded the speed of written production. These negative effects are interpreted in light of Kellogg's (1996) cognitive model of writing as suggesting no serious interference with L2 writing processes and are taken as cautions for, rather than counterevidence against, the use of the think-aloud method to obtain L2 writing process data.

© 2014 Elsevier Inc. All rights reserved.

Keywords: Reactivity; Think-aloud; Second language acquisition (SLA); L2 writing; Argumentative writing; Chinese EFL writers

Introduction

In psychology, education, and cognitive science, concurrent verbal protocols have been regarded as a major source of data or evidence through which the human mind can be indirectly read. In first language (L1) and second language (L2) research, verbal reports have been collected, coded, and analyzed to unveil what underlies visible learner performance, behaviors, and habits to develop both theoretical and pedagogical insights. Specifically, in both L1 and L2 writing research, concurrent verbal reports have been gathered to construct writing models (e.g., Flower & Hayes, 1980), investigate the subprocesses of writing (e.g., Larios, Marín, & Murphy, 2001; Manchón, Roca de Larios, & Murphy, 2009; Zellermayer & Cohen, 1996), distinguish skilled from unskilled writers (e.g., Bereiter & Scardamalia, 1987), compare the cognitive demands of different texts (e.g., Durst, 1987), explore the relations between cognitive

* Corresponding author at: School of Curriculum & Pedagogy, Faculty of Education, University of Auckland Private Bag 92601, Symonds Street, Auckland 1150, New Zealand. Tel.: +64 9 6238899x48750; mobile: +64 221633268.

E-mail addresses: y.chengsong@auckland.ac.nz (C. Yang), guangwei.hu@nie.edu.sg (G. Hu), lj.zhang@auckland.ac.nz, larry.jzhang@gmail.com (L.J. Zhang).

activities and text quality (e.g., Breetvelt, Bergh, & Rijlaarsdam, 1994), study attention processes and the role of noticing (e.g., Armengol & Cots, 2009), compare L1 and L2 writing strategies (e.g., Chenoweth & Hayes, 2001), and investigate the role/use of L1 in L2 writing (e.g., Wang & Wen, 2002).

Its widespread use notwithstanding, the validity of thinking aloud (TA) as a data-elicitation method has been clouded by controversy over its potential reactivity, that is, whether the act of simultaneous reporting might serve as an additional task altering the very thinking processes it is supposed to represent and keep intact (Payne, Braunstein, & Carroll, 1978; Russo, Johnson, & Stephens, 1989; Smagorinsky, 1989; Wilson, 1994). The issue of reactivity is perhaps even more intriguing in language research, which involves “ill-defined tasks” like reading and writing, when “subjects must specify partly or completely their own goals,” and “may generate many equally satisfactory ‘solutions’” (Stratman & Hamp-Lyons, 1994, p. 92). The presence of reactivity, if confirmed, would have profound ramifications for previous L2 and L1 studies whose findings were based on TA data. For example, writing models based on reactive verbal reporting would have questionable fidelity; writing strategies elicited with TA could be non-existent or artifactual; expert-novice differences identified in verbal reports, as Hayes, Flower, Schriver, Stratman, and Carey (1987) speculated, might be confounded with individuals’ different levels of flexibility in handling the constraint of concurrent verbalization; and conclusions concerning correspondence between cognitive processes and text quality would also be discounted if TA acted as a confounding variable.

In contrast to the large body of empirical studies conducted in cognitive psychology, empirical research on reactivity in second language acquisition (SLA) is scanty. In her comprehensive search for SLA studies to be included in a meta-analysis, Bowles (2010) was able to identify only a total of 9 research reports on reactivity studies prior to February 2009 using L2 verbal tasks (Bowles, 2008; Bowles & Leow, 2005; Leow & Morgan-Short, 2004; Polio & Wang, 2005; Rossomondo, 2007; Sachs & Polio, 2007; Sachs & Suh, 2007; Sanz, Lin, Lado, Bowden, & Stafford, 2009; Yoshida, 2008), in addition to just a very limited few involving L1 verbal tasks. To our knowledge, three empirical studies have updated this list (Barkaoui, 2011; Goo, 2010; Yanguas & Lado, 2012), and for our interest’s sake, another four are not to be missed that used L1 writing/revision tasks (e.g., Janssen, Waes & Bergh, 1996; Levy & Ransdell, 1995; Ransdell, 1995; Stratman & Hamp-Lyons, 1994). Notably, the majority of the reactivity studies conducted in SLA used L2 reading tasks (Bowles & Leow, 2005; Goo, 2010; Leow & Morgan-Short, 2004; Polio & Wang, 2005; Rossomondo, 2007; Yoshida, 2008). Only one study (i.e., Sachs & Polio, 2007) touched upon L2 writing, focusing on use of teacher feedback in L2 revision, and one (i.e., Yanguas & Lado, 2012) investigated writing in the heritage language of Spanish. Given the preponderant use of TA as a data collection method in L2 writing research and a tangible deficiency in research on reactivity of TA herein, there is a clear need for more studies examining how TA might affect various aspects of L2 writing. The present study was designed to address this gap. Since TA reactivity in L2 writing is a little traversed area, the following sections will situate our research questions first in the broad context of TA reactivity research and then with respect to reactivity studies of TA in L1 and L2 writing.

Previous research

Verbal reporting, reactivity, and its potential reactivity on writing

Verbal reporting involves bringing thoughts into consciousness, (re)coding the thoughts verbally before verbalizing them (Ericsson & Simon, 1993). Ericsson and Simon distinguished three levels of verbalization. Level 1 verbalization requires no verbal recoding or other intermediate processes but “simply the vocalization of covert articulatory or oral encodings” (p. 79). Level 2 verbalization involves verbal recoding of thoughts and mere explication or labeling of “information that is held in a compressed internal format or in an encoding that is not isomorphic with language” (p. 79). Level 3 verbalization requires not only recoding of thoughts but also an explanation of thoughts or thought processes. Ericsson and Simon predicted that nonmetacognitive verbal protocols (i.e., Level 1 and Level 2 verbalization) would reflect the nature of cognitive processes fairly accurately, though increasing time on task slightly, and that metacognitive verbal protocols (i.e., Level 3 verbalization) would change the structure of thoughts or the sequence of heeded information and increase time on task. They synthesized extensive empirical evidence in psychological and cognitive research that was consistent with their predictions and explained the presence and absence of reactivity in terms of an information processing model of cognitive processes which posits that “*only information in focal attention* can be verbalized” (p. 90; emphasis original). Based on this hypothesis, nonmetacognitive verbalization causes no reactivity in that it does not inhibit sequences of information otherwise duly heeded and

Download English Version:

<https://daneshyari.com/en/article/363986>

Download Persian Version:

<https://daneshyari.com/article/363986>

[Daneshyari.com](https://daneshyari.com)