

A Critical Assessment of A Research Paper

The research paper to be critiqued in this article is chosen from *Journal of Second Language Writing*, a first-class international journal in the field of applied linguistics centering on second/foreign language writing and writing instruction researches, contributing to both theoretical developments and practical solutions in second/foreign language teaching or learning as well as writing teaching or learning. This paper published in 2020 by Elsevier Inc. and co-authored by Lin Sophie Teng and Lawrence Jun Zhang examines how Self-Regulated Strategies-based writing instruction influences learners' self-regulation strategies, self-efficacy, and writing performances via a quasi-experiment (Teng and Zhang, 2020), and it is seen by me as a classic model of empirical research in terms of methodological design, results representation, and theoretical and practical contributions but with minor shortcomings. The rest of the article is devoted to a critical inquiry into its theoretical frameworks, methodology, and results.

I.Theoretical considerations

The theories generating the research hypotheses and underlying the writing instruction experiment presented in Part I and II of the research paper are self-regulating learning (SRL) within the educational psychology discipline, and SRL and SRL Strategies within sociocognitive perspective - a cross-disciplinary hybrid.

SRL, originated from educational psychology, means a dynamic and constructive process, during which learners set up their study objectives, and then activate and maintain their cognition, motivation, and behaviors for successfully attaining their objectives (Zimmerman and Schunk, 2011, quoted in Teng and Zhang, 2000). However, in this research paper, Teng and Zhang transferred the SRL and its strategy to the field of social cognition, which emphasize three interacting determinants in the learning process - behavioral, personal, and environmental factors (Bandura, 1986, p.18, quoted in Teng and Zhang, 2020) and then presented the guiding theories to scaffold their research - learners as agents (Winne and Hadwin, 2010, quoted in Teng and Zhang, 2020), self-efficacy as a proximal determinant in SRL (Schunk and Ertmer, 2000, quoted in Teng and Zhang, 2020), learning strategies - cognition, metacognition and motivation (Zimmerman, 2013, quoted in Teng and Zhang, 2020) and socializing agents (Boekaerts, Pintrich, and Zeidner, 2000, quoted in Teng and Zhang, 2020), which are regraded key components to foster SRL. Besides, to improve SRL, they adopted one tailored model for improving SRL Strategy in writing - the Self-Regulated Strategy Development (SRSD) model, which is composed of stages such as background knowledge development, discussion, modeling, memorization, support, and independent individual practice (Harris and Graham, 1996, quoted in Teng and Zhang, 2020).

In the above-mentioned theories, is conceived the purpose of the empirical research paper - an examination of the effects of Self-Regulated Strategies-based writing instruction on learners' self-regulation strategies, self-efficacy, and writing performances by means of an experiment (Teng and

Zhang, 2020). Moreover, it is also deduced from previous researches. Since SRL has proven fruitful in improving academic attainments and fostering excellent learners, since SRL has been recognized as a key component of second/foreign language learning, since SRL Strategy instruction has produced good academic results, since SRL Strategy instruction has been well set up in L1 learning domains, there are insufficient in L2 writing contexts, so the research of SRL Strategy-based writing instruction in L2 contexts in this paper is expected to bridge the gap (Teng and Zhang, 2020).

To guide the experimental research, two research questions are proposed in the research paper. One is whether writing instruction for SRL Strategy has some effect on learners' writing performances, SRL strategies, and self-efficacy and the other is what differences between students in control and experiment groups are (Teng and Zhang, 2020). The research questions are intended to test the causal effects of writing instruction for SRL on writing performances, but from my perspective, they are intended indirectly to test the effectiveness of SRL Strategy theory in achieving positive learning outcomes.

In summary, Part I and II of the research paper introduce appropriately what the research is about, its theoretical framework, literary researches informing it, and its research questions. The research is motivated by its theoretical frameworks and is also oriented to previous researches gaps, and the research hypotheses are closely related to theories and literature. However, there are four shortcomings in this part. One is that the research is not problem-oriented, meaning that the research is not intended to solve practical problems, and from my perspective, it is not appropriate for a 5-month long quasi-experimental intervention to address only theoretical gaps without targeting practical problems. Besides, although the guiding theories are appropriately presented, I harbor reservation that they are sufficiently and clearly addressed since different SRL processes and components are given by scholars from different research domains and SRL & SRL Strategies do not self-reveal the specific domains where they are formulated. Thirdly, the three dimensions of self-efficacy are not presented in Part II, which are the components of the questionnaire aiming to test learners' self-efficacy levels while the four dimensions of SRL Strategies are well presented there. Lastly, the Self-Regulated Strategy Development model for SRL training (Harris and Graham, 1996, quoted in Chen and Liu, 2005, p. 334) to be employed in the writing instruction experiment is excluded from there.

II. Methodology

Part III of the research paper is devoted to research methods and the appropriately chosen research methods are targeted research questions and are elaborate and rigorous.

Since the purpose of the research is to explore how the teaching of SRL Strategies in writing affects learners' writing performance, their use of SRL Strategies, and their self-efficacy levels, a quasi-experiment is the appropriate method to achieve this purpose (Robinson and McCartan, 2016, pp. 126 -127). Accordingly, there are two research questions to guide this empirical research: whether the writing instruction of SRL Strategies impacts the other three variables and whether the two groups

(experiment group and control group) differ in terms of the three variables at the end of the experiment (Teng and Zhang, 2020). Besides, writing tests and questionnaires are employed to collect research data.

The experiment is a 30-hours or 5-months long writing instruction. Its participants of 80 sophomores, chosen by convenience sampling from English major classes in a middle-level university in China, are categorized into experiment group and control group with similar demographic features (Teng and Zhang, 2020). The experiment group is taught genres such as narration, exposition, argumentation, and persuasive essay and SRL Strategies such as cognition, metacognition, and social behaviors strategies within a modified SRSD model being made up of 6 periodical stages such as background knowledge development, discussion, modeling, memorization, support and independent individual practice (Harris and Graham, 1996, quoted in Teng and Zhang, 2020), during which the control group is instructed only the four genres, but their textbooks and in- or after-class tasks are the same as those of the experiment group. Besides, three argumentation writing tests are administrated before, after, and one month after the writing instruction to examine the efficacy of the writing instruction for SRL Strategies, and learners' argumentative essays are assessed by a scoring rubric established by Jacobs et al. (Jacobs et al., 1981, quoted in Teng and Zhang, 2020), and two raters are independent and their intra-rater and inter-rater figures are satisfactorily reliable. Finally, writing scores within groups and between groups are examined by paired sample t-test and covariance analysis (ANCOVA) respectively for statistically significant differences.

Meanwhile, two questionnaires are implemented before and after the writing instruction to detect learners' SRL Strategies and self-efficacy. Learners' use of SRL Strategy is surveyed by Writing Strategy Questionnaire for Self-regulated Learning, a 7-point Likert - scale, comprising cognitive, metacognitive, behavioral, and motivational dimensions, each with secondary divisions (Teng and Zhang, 2020, quoted in Teng and Zhang, 2016a). On the other hand, learners' self-efficacy is surveyed by Writing Self-efficacy Scale for Second Language, a 7-point Likert - scale, being composed of 3 dimensions such as linguistics, self-regulation, and performance (Teng and Zhang, 2020, quoted in Teng et al., 2018). The reliability and validity of the two questionnaires are satisfactory. As to data analysis, Mann-Whitney U tests and Wilcoxon signed-rank tests are employed to detect the difference between and within the two groups.

In sum, the research paradigm of the reach in Part III is purely quantitative, and its rigorousness and elaboration characterize the methodology and make it unexceptionable. However, if the research in discussion were targeted to solve practical problems, a mixed method intervention design - qualitative data collection is integrated into the experiment (Creswell and Creswell, 2018, p. 343) - would be a better alternative than a purely quantitative one. If qualitative data collection is implemented before the experiment, the results will help researchers to better comprehend the problems their research subjects face. That's why Teng and Zhang (2020) recommended doing diagnosis to know the subjects' writing proficiency as well as their use of SRL Strategy and self-efficacy. Secondly, since quantitative design is good to observe what people say and do and qualitative methodology excels at exploring meanings behind

people's behaviors (Robson Colin and McCartan, 2016, pp.19-20), qualitative data collections done during and after the experiment will help researchers understand their subjects better.

III. Results and relevance to the theory

Part IV, Part V, and Part VI of the research paper revolve around the results, the discussion, and the conclusion of the research respectively. On the whole, data collected from writing tests and questionnaires revealed positive effects on learners' writing performance, the use of SRL strategies, and their self-efficacy yielded by the writing instruction targeting SRL Strategies (Teng and Zhang, 2020).

Before the experiment, statistical analysis of data from the pretest summarized the comparability between experiment group and control group in groups of factors entitled writing scores, SRL Strategies, and self-efficacy (Teng and Zhang, 2020).

After the experiment, both groups have reported obvious progress in their writing performance, and this improvement with a decreasing magnitude was sustained one month after; however, the experiment group has significantly out-performed its counterpart, which overwhelmingly confirmed the effectiveness of SRL Strategy writing instruction (Teng and Zhang, 2020).

As to SRL strategies, significant differences in monitoring goals and planing ideas (metacognitive strategies) have been found in the two groups after the writing instruction, proving the effects of metacognitive strategy teaching on the improvement of SRL strategy use. Likewise, significant differences in the use of peer learning strategy (targeting, social behavior strategy) and interest enhancing strategy (non-targeting, motivational strategy) have occurred between groups. On the contrary, no significant differences in two cognitive strategies - processing texts (targeting) and rehearsing knowledge (non-targeting) have been found between groups, and similarly, no significant differences are detected between groups in handling feedback (non-targeting, social behavior strategy), emotional control and motivational self-talk (non-targeting, motivational strategies) while within experiment group, processing text strategy has increased significantly with mild effect size and emotional control has significantly improved (Teng and Zhang, 2020). It is obvious that the satisfactory significant effects have confirmed the effectiveness of a majority of SRL strategic factors, but according to Teng and Zhang (2020), those non-significant increases don't mean invalidation of other strategic factors but rather an invitation for subsequent SRL Strategy instructions with appropriate research periods and targeting a whole cluster of factors to fully exert the promoting effects of SRL Strategy theory.

As to academic self-efficacy, the experiment group has significantly out-performed its counterpart in terms of linguistic efficacy and performance efficacy but no significant difference is demonstrated between them in terms of self-regulatory efficacy. It seems to Teng and Zhang (2020) that self-regulatory efficacy, as a more complex strategy, needs a long time to exert its effects.

Up to now, the Results part of the research paper has provided sufficient positive answers to the two research questions raised in the Methods part and the Discussion part has explained the possible reasons for non-significant improvements in some factors between groups. All this has confirmed the effectiveness of writing instruction of SRL Strategies in classroom environments but the unsatisfactory revelations tend to trigger subsequent teaching experiments to confirm the efficacy of other SRL Strategy factors, thus completing and perfecting SRL Strategy and academic self- efficacy theories.

In conclusion, the classic six-part pattern of the research paper demonstrates high-quality research with key components such as research questions, theoretical frameworks, research methodology, and research results. The research reported in this paper is well situated in previous researches, informing it and leaving it a research gap, and the research questions deduced from theoretical frameworks, lead the research design to test the research hypotheses generalized from the “supposedly true” research theories. In the Methods part, a quasi-experiment is carried out to test the hypotheses, and writing tests and questionnaires are implemented to generate data. In the Results part, appropriate statistical analyses techniques are employed to process data, and the significant results have well answered the research questions and confirmed the truth of experiment hypotheses but non-significant results will trigger subsequent research to improve, confirm and perfect research theories. All in all, the reach reported in this paper is appropriately designed and implemented and the research paper is seen as a classic, but if its theories are completely, sufficiently, and clearly presented, and are also directly targeted factors in questionnaires, it would be perfect.

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