

Self-Regulatory Control and English Writing Proficiency Among Japanese University Students

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The present study aimed to examine the relationship between students' self-regulatory capacity and their self-ratings of English writing proficiency. Self-regulatory capacity has been shown to be important to writing in a foreign language, but survey studies have yielded mixed results. The reliability of the self-regulation survey measure used here was established based on results from 56 first-year university English majors in Japan. Further results showed that ratings of self-regulatory capacity predicted self-assessments of EFL writing ability. It is hoped that these findings can contribute to classroom practices that foster learning to write in Japanese university settings.

本論の目的は、学生の英語ライティングにおける自己調整能力と、英語ライティングに関する自己評価との関係性を明らかにすることである。様々な研究で外国語ライティングにおける自己調整能力の重要性が示されてきたが、調査結果は必ずしも一様ではなかった。本調査を行うにあたり、アンケートの質問項目には信頼性のある基準を英米語学科に所属する1年生56名への予備調査により作成し、同じ学生らを被験者とした。その結果、ライティングの自己調整能力に関する自己評価と、ライティング能力に関する自己評価との間に相関性が認められた。本論で導き出された結果が、今後の教育現場における“learning to write”の活動に貢献することを願っている。

Research on writing in a second language (L2) can foster an understanding of how English is learned and used in settings where it is a foreign language. The complex nature of L2 writing has been described in terms of learning to write and writing to learn, the latter of which includes writing to learn content and writing to learn language (Hirvela, Hyland, & Manchón, 2016). This article is focused on the former dimension. Emphases in studies on learning to write vary widely, encompassing how L2 writers gain control over processes used to produce texts, the features and genres that texts exhibit, and questions of audience. The learning to write perspective might thus inform instruction by viewing writing as both individual and social. This article is concerned with how undergraduate L2 writers gain control over processes used to create texts from the perspective of individual differences (IDs).

Individual Differences and Self-Regulation in L2 Writing

In general, studies of IDs focus on consistent cognitive, affective, or motivational variables which might interact with instructional contexts, learning goals, or pedagogic techniques. In the context of L2 writing, Kormos (2012) described IDs as a neglected area of research. She positioned ID variables at the center of Kellogg's (1996) model of writing processes and argued that the influence of IDs might be observed at each stage in the process, including planning (retrieving and ordering ideas), translation (putting ideas into expression by using lexical, syntactic, and other linguistic resources), execution (producing a written text, whether handwritten or typed), and monitoring (checking and revising the content). Kormos' approach differentiated between motivational (e.g., self-regulation) and cognitive (e.g., working memory) variables, while at the same time acknowledging that doing so imposes a binary, and perhaps untenable, classification into many distinct variables. Importantly, she concluded that task variables might interact with IDs, which brings into question the nature of writing measures used in research.

Self-regulation, which is the focus of the investigation discussed here, is a multi-dimensional ID construct which can be understood from several different theoretical angles, as it incorporates metacognitive, motivational, and behavioral aspects (Zimmerman, 2001). The stance taken on self-regulation by Dörnyei (2001) and others proposes that a focus on self-regulatory capacity might shift attention from viewing strategies as behavioral outcomes towards volitional processes. That is, attempts to understand self-regulatory control strategies place emphasis more on the processes related to learning and performance than on the frequency of use of any strategy. They focus on understanding causal links between motivation and behavior, wherein goal-setting influences goal-striving, the effectiveness of which is mediated by self-regulation (Dörnyei, Henry, & Muir, 2016). Dörnyei (2001) identified five categories of self-regulatory control,

which involve conscious strategies that learners vary in their ability to use. These strategies, it is argued, can help learners to motivate themselves. The strategies appear in Table 1 alongside definitions and examples of how they might be realized in L2 writing instruction. For additional teaching suggestions see Andrade and Evans (2013).

This approach to self-regulation has been empirically supported in EFL contexts. Tseng, Dörnyei, and Schmitt (2006) developed a survey instrument to measure self-regulation in L2 vocabulary learning, demonstrating that the five control strategies loaded on a single factor in an exploratory factor analysis. Further cross-sectional research yielded evidence for links between self-regulation and additional factors in vocabulary learning (Tseng & Schmitt, 2008). Using the instrument developed by Tseng and colleagues, researchers have extended the investigation of self-regulation in vocabulary learning to other EFL contexts, including Japan (Mizumoto & Takeuchi, 2012). In the domain of writing, Imai (2016) reported on the development of a survey of writers' self-regulatory capacity in a U.S.-based English program.

In an EFL context, a study by Teng and Zhang (2016) supported a multidimensional model of self-regulation in L2 writing, as well as links to writing performance. The research, carried out with first- and second-year undergraduates at six universities in China, used a questionnaire and a timed-writing task from the International English Language Testing System (IELTS) to determine whether self-regulation predicts writing performance. Analyses supported a model of self-regulation as a single construct and identified four interacting dimensions: cognition, metacognition, motivation, and social behavior. Within these dimensions, six specific strategy types significantly predicted writing outcomes: (a) text processing, which is a cognitive strategy; (b) idea

planning, which is a metacognitive strategy, as is (c) goal monitoring; (d) emotional control, and (e) self-talk, both of which are motivational strategies; and (f) feedback handling, which is a social behavior strategy. The authors concluded by noting the importance of understanding L2 writers' preferences for strategy use and teaching strategies related to writing outcomes.

Another investigation of self-regulatory control strategies by Csizér and Tankó (2017) shed further light on their role in L2 writing. These researchers studied self-regulation, as well as its relationship to motivation and anxiety, among first-year English majors at a Hungarian university. Using a survey tailored to L2 English writing, they found varying positive and negative relations among the five subscales. Also, on a 5-point scale, the tendency to use each category of strategy differed, according to the following rank order: metacognitive (3.7) > emotional (3.6) > environmental (3.6) > satiation (3.4) > commitment control (3.3). Self-regulatory strategy use was linked to increased motivation and decreased anxiety, but not to increased writing test scores. The authors concluded that familiarity with control strategies was low and recommended instruction to promote increased awareness and use. It should be noted that the measure of writing used in Csizér and Tankó (2017) was a high-stakes essay test used as a prerequisite for second-year enrollment. As argued by the authors, time limits, learner investment, and the measurement approach taken, among other factors, might have accounted for the lack of a significant relationship between self-regulation and L2 writing.

Measuring L2 Writing Proficiency as Typical Behavior

To summarize, although Teng and Zhang's (2016) study found that self-regulation predicted L2 writing outcomes, Csizér and Tankó's (2017) study did not.

Table 1. *Self-Regulation Strategies (Based on Dörnyei, 2001, pp. 109–116)*

Strategy	Definition	L2 Writing Example
Commitment control	to preserve/enhance original goal commitment	setting deadlines for each stage of a writing assignment, in addition to a final deadline
Metacognitive control	to monitor/control concentration and deter procrastination	monotasking, or mentally focusing on key writing tasks one at a time
Satiation control	to deter boredom/complacency once a task becomes familiar or routine	trying new or unfamiliar writing tools (e.g., word processing applications, speech-to-text tools)
Emotion control	to manage positive or negative emotions	talking with peers, tutors, or instructors about challenges in writing
Environmental control	to avoid distractions and create supportive environments	choosing a place to write that is quiet and free from distraction

Both studies employed a timed measure of academic writing, which raises the possibility that their different results might be due to the fact that survey instruments and timed writing tests can be distinguished according to their contrasting focus on typical behavior versus maximal performance. Outside the domain of L2 writing, this can be compared to a jogger answering questions about her running habits versus demonstrating them in a race. In consideration of this issue, as well as the need to expand the range of outcome variables investigated in this area, the present study adopted a different approach by asking L2 writers to evaluate their own writing proficiency. Aligning measures by seeking to understand both self-regulation and L2 writing proficiency in terms of typical behavior might provide another way to capture the relationship between these two constructs. For instance, asking learners to judge their own writing ability could provide an evaluation based upon multiple experiences with writing in the L2 over time, in contrast to evaluations based on a single written product. For this reason, the present study employed self-evaluation as the criterion variable.

Study Goal and Research Questions

The foregoing literature review points to a gap in the research. Namely, there are only a small number of studies on self-regulation in EFL settings, and these studies have yielded mixed results regarding its relationship to writing outcomes. The studies reviewed relied exclusively on timed writing tests (i.e., measures of maximal performance) as the criterion variable. Therefore, the present research aimed to develop a survey of self-regulatory control strategies in writing and to explore their relationship to L2 writing as typical behavior. There were three research questions:

1. Does a survey designed to measure the construct of self-regulatory control in writing do so reliably? Based on previous studies, it was expected that the survey would show acceptable reliability.
2. Do the survey scales show a relationship between the subcomponents of self-regulatory control? Based on the assumption that various self-regulatory control strategies represent facets of a single construct, it was expected that these scales would be positively and significantly correlated.
3. Does the survey predict writers' self-evaluations of their writing proficiency? Based on the foregoing section, it was expected that participants' overall survey scores would predict scores on the self-assessment.

Methods

This study is based on data from 56 first-year students (36 female; 20 male; average age 18.6 years) enrolled in an English for academic purposes course at a private foreign language university in Japan. Participants in this course had TOEFL scores above 440 and were required to complete several writing assignments throughout the year, thus they were considered an appropriate sample. They were invited to complete a survey administered online. Initial data collection from six classes in January 2016 yielded data from 36 students (roughly a 30% return rate). Additional data were collected in July of 2016 from one class of 20 students. All students were informed of the purpose of the research, told their participation was voluntary, and provided with the researcher's contact information in case they had questions. They agreed to participate by checking a box on the survey.

The measure of self-regulation used in this study was adapted from Tseng, Dörnyei, and Schmitt (2006). The instrument contained 20 items (four each concerning commitment, metacognitive, satiation, emotion, and environmental control). The original items were revised with a focus on writing. They were then translated into Japanese by a native speaker. The items were presented in both English and Japanese, accompanied by a 6-point Likert scale, using the labels *Strongly agree*, *Agree*, *Partly agree*, *Slightly disagree*, *Disagree*, and *Strongly disagree*.

Regarding the criterion variable, participants rated their writing proficiency on a 1 to 10 scale based on the ACTFL proficiency guidelines (American Council on the Teaching of Foreign Languages, 2012). Descriptors used the levels *novice*, *intermediate*, *advanced*, and *superior*. The labels *low*, *medium*, and *high* allowed for further differentiation within the first three levels. After processing the data, including reverse scoring of two items on the self-regulation measure, they were analyzed in R (Version 3.1.3).

Results

Research Question 1: Survey Reliability

The first research question focused on the reliability of the survey. To address this question, internal consistency was assessed by computing Cronbach's alpha for each of the five scales. The results in Table 2 show that these values ranged from .63 to .86, indicating mostly good reliability. While the values for the emotion and satiation scales were somewhat low, this range of values is nearly the same as previous studies of self-regulation in EFL settings (see Csizér & Tankó, 2017). Furthermore, the average value was .73, which indicates acceptable reliability.

Table 2 also provides the means and standard deviations for each scale.

Table 2. Scale Means and Internal Consistency

Scale	<i>M (SD)</i>	Alpha
Environmental (ENV)	4.41 (0.81)	.78
Commitment (COM)	3.55 (0.87)	.74
Emotion (EMO)	3.49 (0.79)	.65
Metacognitive (MET)	3.41 (1.12)	.86
Satiation (SAT)	3.38 (0.85)	.63

Research Question 2: Intercorrelations Between Subscales

The second research question was concerned with the relationships between the five survey scales. Table 3 shows the Pearson correlations between the five scales. These correlations were positive, ranging from .38 to .81. In testing for significance, owing to multiple comparisons, the Bonferroni adjustment was used to set an alpha level of .005 (.05/10). Based on this, significant relationships were found between each of the scales, as shown in Table 3.

Table 3. Correlations Between the Five Self-Regulatory Control Scales (n = 56)

	COM	MET	SAT	EMO	ENV
COM	-				
MET	0.64	-			
SAT	0.54	0.81	-		
EMO	0.45	0.73	0.66	-	
ENV	0.38	0.64	0.55	0.42	-

Note. All coefficients are significant at $p < .005$.

Research Question 3: Predictive Validity

The final research question addressed whether the survey predicts L2 writers' self-evaluations of their writing proficiency in this study context. To answer this question, the participants' overall mean scores on the self-regulation survey were entered as a predictor into a simple regression model with their self-evaluation scores as the criterion variable. The resulting model was significant, $F(1, 54) = 6.36$, $p = .015$, $R^2 = .105$. Thus, self-regulation accounted for 10.5% of the variation in proficiency. This model furthermore suggests that for each 1-point increase in self-regulatory control, self-evaluated writing proficiency increases by 2.37 points.

Discussion

Regarding the three questions that guided this study, first, the results indicated that the survey instrument was reliable, in terms of its five subscales and its average reliability. This is comparable to other studies that have examined self-regulation in different language skill areas, such as vocabulary (Tseng, Dörnyei, & Schmitt, 2006) and on L2 writing, but in different learning contexts (Csizér & Tankó, 2017). Next, the correlational analyses (see Table 3) revealed that the five subconstructs were significantly correlated. The strength of the positive relationships between these scales varied from weak to strong. For example, the relationship between commitment and environmental control ($r = .38$) suggests that perhaps goal preservation strategies are only weakly related to ones' attempts to find a good writing environment. However, in the case of metacognitive and satiation control ($r = .81$), there appears to be a close link between ones' ability to monitor and control concentration, on the one hand, and to deter boredom in the face of routine writing tasks, on the other. Finally, overall scores on the survey instrument significantly predicted EFL learners' self-evaluations of their writing proficiency, although the model only accounted for roughly 10% of the variation in proficiency, suggesting that other factors also contributed. This finding builds directly on previous studies that have examined the predictive value of self-regulation in L2 writing on timed writing measures with mixed results (Csizér & Tankó, 2017; Teng & Zhang, 2016). Specifically, it demonstrates that it might be possible to link self-regulation to a wider range of outcomes in L2 writing by conceptualizing L2 writing as typical behavior.

One limitation of this study is the generalizability of the findings. Because this study was conducted with a limited number of participants at one school, more work is needed to determine whether these results are valid for other writers in this setting, as well as those attending other schools in Japan. Given the research context, which was a foreign language university, it is not claimed that the findings apply to Japanese university students in general. In addition, despite the fact that using self-evaluation as an outcome measure is a novel contribution to research on self-regulation in L2 writing, self-report data involve caveats. Namely, self-report of productive skills such as writing might reflect learners' "communicative intentions rather than the actual effect of their efforts to convey messages to an interlocutor" (Ross, 1998, p. 9). Therefore, future studies should examine multiple outcomes to enhance overall validity. A closer inspection of processes in writing, too, could be gained by expanding the data sources used to include, for example, interviews and think-aloud protocols.

There are noteworthy pedagogical implications of such research, much of the value of which lies in enhancing classroom practices. For instance, building on a suggestion from Andrade and Evans (2013), lessons could focus on having students chart their strengths and weaknesses in traditional areas such as organization, grammar, usage, but also as reflected in peer and teacher comments, across multiple writing assignments. By sharing and discussing these charts, students might gain a clearer focus on various writing sub-tasks (e.g., brainstorming, drafting, and responding to comments), come to an understanding and acceptance of the challenges of L2 writing, and begin trying out different approaches or techniques that their classmates note as strengths. These revelations might, in turn, enhance their metacognitive, emotion, and satiation control, which, in the present data, were rated lower than environmental or commitment control (see Table 2). Ultimately, this has the potential to increase their overall motivation to write. Such charts can also be included in a writing portfolio to foster coherence across assignments and to facilitate better assessment practices.

This investigation clears the way for future research. Work is needed to expand the scope of the variables examined to include motivational, cognitive, and personality factors, as well as to identify appropriate writing measures. First-year students at universities in Japan are learning to write in their L2, which requires them to gain control of both processes and outcomes. This shift from learning English to using it as a form of academic expression presents a dynamic context for research to understand the metacognitive, motivational, and behavioral aspects of self-regulation as it contributes to development. Thus, we should aim to deepen our understanding of individual factors in learning to write.

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