

## **Examining Learners' Self-regulatory Behaviors and Their Task Engagement in Writing Revision**

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Autonomous learners are described as those who assume responsibility for and take charge of their own learning. However, research has pointed out that autonomy does not represent a fixed state but a developmental continuum, making it difficult to measure those in the transition of becoming autonomous. As one's autonomy development can be explained by one's self-regulatory behaviors, a learner's development of autonomy can be investigated through how he/she evaluates his/her participation in a learning task. This study aimed to explore students' self-regulation levels in the participation of writing assignments and revisions and their task engagement during the multi-drafting revision process. Twenty-eight students participated in this study. In an 18-week semester, the students were required to complete four writing projects, each with three drafts. The students received teacher feedback for revising their works. Data collection tools included one survey, students' drafts, and one interview. The survey assessed the students' learning attitudes/beliefs and their behavioral regulation; the writing drafts were used to identify their task engagement in revising from the first to the final drafts; the interview was further conducted to investigate factors affecting the students' development of self-regulatory behaviors and task engagement. The findings showed that more than 90% of the students perceived writing as a good way to improve their analytical skills, master the English language, gain a sense of pride in their own ability, and enhance their future career. In addition, among the 28 students, 18 students demonstrated consistency between their Relative Autonomous Indexes (RAIs) and their task engagement levels. Another ten students were further interviewed, and their responses indicated that semester workload, extracurricular activities, and genre preference could impact one's task engagement level in the revision process.

**KEY WORDS:** learner's attitudes/beliefs, learner autonomy, Relative Autonomy Index, self-regulated behaviors

In one's learning, different factors bear potentials to affect the learning outcomes. These factors often can be divided into external and internal ones, covering teachers and students, the two main parties in teaching and learning. The external factors include teachers' formative experiences, teachers' properties, such as skills and personality, and teachers' classroom behaviors. The internal factors concern learners' properties, such as abilities and attitudes (Dunkin & Biddle, 1974). Consequently, any effort to improve one's learning outcomes should start from one of these two aspects.

Past research has revealed that, in the learning context, students bring into the classroom different beliefs and attitudes, factors contributing to their learning process and ultimate success (Abraham & Vann, 1987; Breen, 2001; Horwitz, 1987, 1999; Mori, 1999; Tanaka & Ellis, 2003; Wenden, 1986, 1987; Yang, 1999). Moreover, Ellis (2008) has pointed out "learner beliefs are situation specific and dynamic" (p. 11). For instance, past research has suggested that the learners' epistemological beliefs may influence the learning processes that they choose to engage in (Hofer, 2001). Commenting on the concept of self-regulation, Zimmerman (2002) emphasized that it is "not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic skills" (p. 65). Yang and Kim (2011) have investigated L2 learner beliefs from a sociocultural lens and found that learners' L2 beliefs are constantly evolving according to the goals they set. What can be observed in these studies is an intertwined relationship among learner beliefs, self-regulatory behaviors, and learning progress.

Although many studies have been conducted to gain more insight into such a relationship, few studies have explored what beliefs or attitudes learners hold regarding EFL writing, especially a multi-drafting process that places a heavy emphasis on revision. The goals of this study are to explore students' self-regulatory behaviors in writing/revision and their task engagement in revision when responding to teacher feedback.

### *Literature Review*

This literature review consists of two parts. The first part briefly covers past research on learner beliefs; the second part reviews the self-determination theory, with the emphasis on learners' self-regulatory behaviors and motivation.

#### *Past Studies on Learner Beliefs*

In every discipline dealing with human behaviors and learning, beliefs are a central construct (Ajzen, 1988; Fishbein & Ajzen, 1975). When the context is narrowed down to the classroom, one important factor to be considered is that students all bring different perceptions, attitudes, beliefs and meta-cognitive knowledge. All these factors have been recognized as influential in their learning process and success (Breen, 2001). To identify what beliefs second or foreign language students hold, different approaches can be employed. To begin with, Horwitz (1987) adopts the normative approach in which beliefs are regarded as preconceived ideas or misconceptions identifiable through Likert-style questionnaires. BALLI has been incorporated into various studies to investigate how different variables affect their learning outcomes. In addition, some researchers influenced by cognitive psychology believe that learner beliefs are part of learners' underlying metacognition (Flavell, 1987; Ryan, 1984). Flavell (1979, 1981) phrases such meta-cognitive knowledge as "personal knowledge," which encompasses learner aptitude, personality, and motivation. Also, other researchers adopt the contextual approach, for they believe that learner beliefs vary according to context. Still, other scholars (Ellis, 2002; Kramsch, 2003) analyze the metaphors that learners use to describe their learning and identify their beliefs indirectly. Finally, depending on different theoretical perspectives, researchers have identified beliefs as insights (Omaggio, 1978), learner assumptions (Victori & Lockhart, 1995), culture of learning (Cortazzi & Jin, 1996), implicit theories (Clark, 1988), self-constructed representational systems (Rust, 1994), conceptions of learning (Benson & Lor, 1999), and strong filters of reality (Arnold, 1999). What these

studies share is the common ground that learner beliefs are dynamic and situated, meaning that one's beliefs can vary according to the involved tasks and environments.

For students learning how to write, the study carried out by Hammann (2005) investigated the writing beliefs, self-regulatory behaviors and epistemology beliefs of pre-service teachers in academic writing tasks. The findings indicated that students' beliefs and feelings about learning and writing played an important role in their self-regulated behaviors. It was suggested that the more self-regulated the students were during writing, the more they believed they could learn to improve their skills, and those who believed writing was learnable made more effort to self-regulate their task involvement.

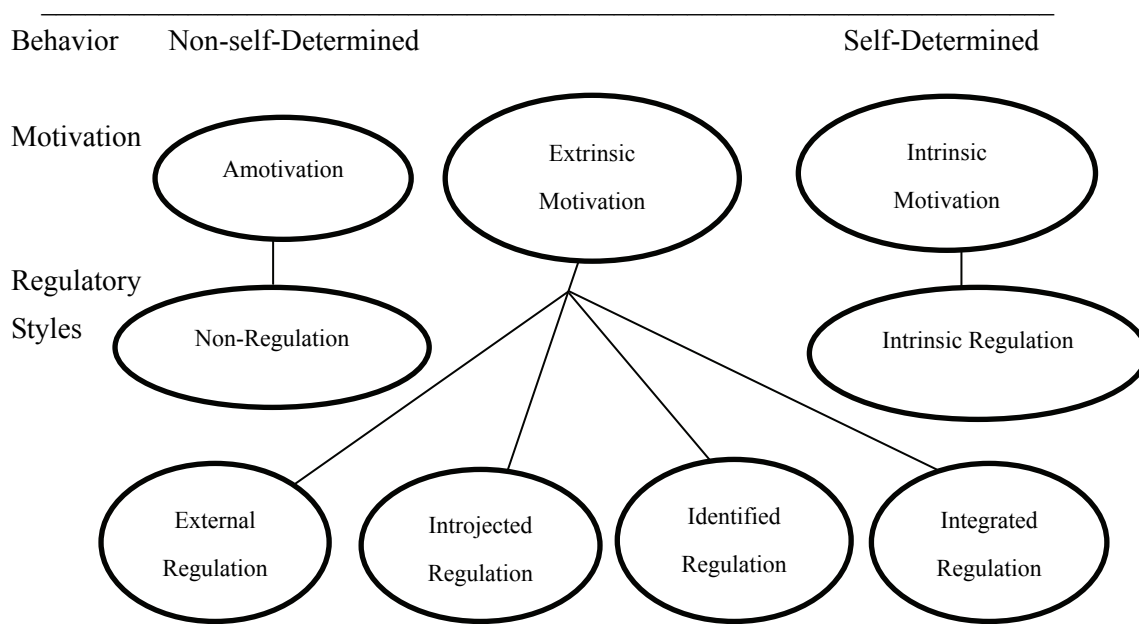
In addition, among the beliefs identified by studies and researchers, learners' self-efficacy beliefs have gained much attention recently. Breen (2001) investigates how learners' attributes (beliefs, aptitude, personality, or the concept of identity) affect their conceptions of themselves and the learning environment. This researcher asserts that learners work selectively within their learning environment to respond to the linguistic and communicative data made available to them. This selectivity is believed to be determined by learners based on what they regard as facilitating or hindering their learning and what conceptualizations they hold about the language to be learned. This view is of particular relevance to the current study, for this study aims to explore whether students choose to respond to the communicative data (teacher feedback) made available in their learning environment (a multi-drafting writing process).

### *Self-determination Theory and Learner Motivation*

One's beliefs/attitudes in learning a certain subject directly or indirectly influence one's performance. In the field of behavioral science, the self-determination theory (SDT) is used as one of the tools to explain the relationship between these two factors: one's beliefs and learning behaviors. According to Deci and Ryan (2012), self-determination theory (SDT) is "an empirically derived theory of human motivation and personality in social contexts that differentiates motivation in terms of being autonomous and controlled" (p. 416). As self-regulation is conceptualized as a continuum, individuals' levels of self-regulation may vary in response to different behaviors. The highest level of self-regulation involves freely-taken actions in which a person finds interest or importance, and the lowest level involves one's doing of an activity out of a sense of force from some external agent.

Within SDT, Deci and Ryan (1985) introduced the organismic integration theory (OIT) to delineate the different forms of extrinsic motivation (see Figure 1). These types are arranged from left to right in terms of the degrees of self-determination. At the far left of the self-determination continuum is amotivation, the state of lacking the intention to take action or respond. According to studies, amotivation results from learners' not valuing an activity (Ryan, 1995), not feeling competent to perform a task (Bandura, 1986), or not expecting an activity to yield a satisfactory outcome (Seligman, 1975). At the far right of the continuum lies intrinsic motivation, in which a learner performs an activity for its inherent satisfaction. In contrast, extrinsically motivated behaviors cover the continuum between amotivation and intrinsic motivation, with varying extents of regulation in autonomy.

Among all extrinsically motivated behaviors, the least autonomous are referred to as externally regulated. Such behaviors are performed to satisfy an external demand or obtain a reward. A second type of extrinsic motivation, introjected regulation, illustrates the condition when a learner takes in a regulation but does not fully accept it as his/her own. Next, a more self-determined form of extrinsic motivation is regulation through identification. Identification reflects that a learner consciously values a behavioral goal or regulation. Last, the most autonomous form of extrinsic motivation is termed integrated regulation. It is said that a learner's development reaches integration when his/her identified regulations are fully assimilated to his/her own self. Although actions taken under integrated motivation share many qualities with those influenced by intrinsic motivation, they are still viewed as extrinsic because they are taken for separable outcomes rather than their inherent enjoyment.



**Figure 1.** Types of Motivation and Regulatory Styles, adapted from “Intrinsic and extrinsic motivations: Classic definitions and new directions,” by Ryan & Deci, (2000a), *Contemporary Educational Psychology*, 25, 54-67.

When SDT is applied to learning, intrinsic motivation is naturally more desired, for it is highly associated with deeper learning, better performance, and a higher level of positive well-being (Deci & Ryan, 2000; Ryan & Deci, 2000a, 2000b). However, the influences of extrinsic motivation should not be underestimated. Past studies in education have linked the more autonomous extrinsic motivation with learners’ higher quality learning (Grolnick & Ryan, 1987), more engagement (Connell & Wellborn, 1991), lower dropout rates (Vallerand & Bissonnette, 1992), better performance (Miserandino, 1996), and higher teacher ratings (Hayamizu, 1997). Clearly, one important note is that neither intrinsic nor extrinsic motivation is a permanent characteristic of an individual. That is, a learner’s motivation in the engagement of a task can vary along the continuum outlined above. However, for a positive change from extrinsic motivation to intrinsic motivation to happen, the right elements need to be present in a certain learning environment.

According to the SDT, when learners’ basic psychological needs of autonomy, competence, and relatedness are fulfilled, intrinsic motivation will develop (Alm, 2006; Deci & Ryan, 2000; Ryan & Deci, 2000a, 2000b). More specifically, the need for *autonomy* describes a person’s need to feel that he/she is carrying out a task of his/her own choice rather than being forced. In addition, the need for *competence* in learning is about the person’s need to feel capable of learning the given material. Last, the need for *relatedness* is the person’s need to feel a sense of connectedness or belonging with other learners or teachers (Deci & Ryan, 2000; Ryan & Deci, 2000a, 2000b). Among these needs, learners develop the feeling of competence through their engagement in an activity. To help learners feel competent, feedback from others in the learning environment has to be regularly provided. Then the degree of autonomy will determine how persistent the learner will be in performing the task (Ryan & Deci, 2002). That is, to become autonomous, learners need to be encouraged to become self-initiating, to solve problems independently, and to receive feedback that supports autonomy.

Today, with the new conceptualization in the studies related to SDT, Deci & Ryan (2012) have highlighted that “the most salient and important distinction within SDT” is no longer “intrinsic versus

extrinsic motivation" or "internal versus external to the person," but *autonomous* versus *controlled motivation* (p. 422). The new categorization states that autonomous motivation covers intrinsic motivation and identified/integrated extrinsic motivation, whereas controlled motivation consists of external control and introjected regulation (p. 422). Furthermore, as most learner behaviors represent a mixture of the various reasons listed in these five categories, autonomy should be considered relative.

Based on SDT, the Self-Regulation Questionnaire (SRQ) is designed to assess the types of motivation or regulation that individuals have in specific domains. The questions covered in the SRQ concern learners' regulation of a particular behavior (in this study, writing and revising their English composition). The format for these questionnaires was introduced by Ryan and Connell (1989). Each questionnaire asks why the respondent does a behavior and provides several possible reasons that have been preselected to represent the different styles of regulation or motivation. The concept of SDT is important to this study because it provides information on learners' behavioral self-regulation and their intrinsic/extrinsic motivation in performing a task.

The Learning Self-Regulation Questionnaire (LSRQ) is for older students and asks respondents why they engage in learning-related behaviors. This questionnaire is formulated with 14 statements covering two subscales: Controlled Regulation and Autonomous Regulation. Seven statements (1, 3, 6, 9, 11, 13, and 14) are related to autonomous regulation, whereas another seven (2, 4, 5, 7, 8, 10, and 12) are linked to controlled regulation. Furthermore, a Relative Autonomy Index (RAI) can be calculated by subtracting the controlled subscale score from the autonomous subscale score to show the level of an autonomous behavior. The higher a positive value the RAI is, the more autonomous the concerned behavior is. Conversely, a higher negative RAI signals a concerned behavior as more non-autonomous.

### ***Research Questions***

This study analyzed the students' survey responses and their course performance, in particular their task engagement from the first draft to the third draft. This study attempted to answer the following research questions.

- 1) What does the Learning Self-Regulation Questionnaire (LSRQ) reveal about the students' behavioral regulation regarding their participation in essay revision?
- 2) What is the relationship between one's RAI level and one's task engagement in revision?

In this study, task engagement was measured based on the students' effort in responding to the feedback provided by the instructor in different drafts. The rationale for focusing on this aspect is that, for all writing projects, the students were provided with teacher feedback for the purpose of revision. The assumption is that when the students understand the given feedback and revise their assignments accordingly, the amount of feedback in their subsequent drafts should reduce. In other words, from the first draft to the final draft, a student's task engagement in revision should serve as an indicator to the reduction of corrective feedback he/she received from the instructor. That is to say, one's desire to improve the quality of one's learning should align with one's efforts in addressing the concerns expressed in teacher feedback.

### ***The Study***

This study was designed to examine the relationships between one's learning attitudes/beliefs about learning and revision and one's task engagement in revision. This section will introduce the participants, the course design (including semester assignments), and data collection tools.

### *Participants*

This study involved 28 students from a public university in northern Taiwan. The students came from two classes instructed by the same instructor, also the researcher. Among them, five were male and twenty-three were female. The students were English majors, and none of them had previous exposure to a multi-drafting process and teacher-given comprehensive feedback. Some reported that they did receive instructor feedback before, but it involved more general rather than specific comments about their writing. Because of their lack of experience, it was necessary for the students to become familiar with the format of teacher feedback and the way to revise their drafts. To make sure the students understood the language and expressions given in comments, explanations were provided during the first two class periods.

### *Course Design*

This course design focuses on the four elements proposed by Benson and Voller (1997), a process-oriented approach, and teacher feedback. This study was carried out in two EFL writing classes, with 13 and 15 students separately. The two classes were organized and instructed in a similar manner. Both courses were designed to encourage the students to exercise their *right* in choosing writing topics. Moreover, in terms of learning *situations*, the students participated in a multi-drafting process and received teacher feedback for revision. All students were required to turn in three drafts for each writing project. On the first two drafts, the students received instructor feedback for revision. On the third draft, they received feedback and a grade. In terms of instructor feedback, the students received electronic, comprehensive feedback covering grammar and essay structure/organization. The students then needed to understand the given feedback (the *skills*) and determine how much they would like to respond to the feedback in their revisions (*exercise* their sense of responsibility).

The study was carried out in an 18-week semester. The students were required to complete four projects, each with three drafts. The departmentally-set curriculum mandated sophomores to acquire concrete ideas about different genres and produce compositions at certain word lengths. In this semester, the students started out writing an average of 300 words and were required to reach at least 500 words for Project 4. For each project, the students would first propose their outlines, receive feedback on genre suitability, and start the three-draft writing process. Moreover, the students were required to keep a writing journal to record this journey of learning to improve their writing. For instance, each week, the students might have different academic projects, extracurricular activities, or personal commitments. The students were asked to reflect on their weekly learning progress, covering challenges or breakthroughs.

### *Data Collection*

In this study, a survey, students' multiple drafts and an interview were used for data collection. The survey was a modified self-regulation questionnaire (LSRQ) from Williams and Deci (1996). The selection of the LSRQ was for its nature of learners' participation in a specified task/activity and the factor of age-appropriateness. Williams and Deci used the LSRQ to understand medical students' engagement in learning how to do medical interviewing. For this study, the task of "doing medical interviewing" was replaced with "doing writing assignments/revisions."

In this study, students' compositions submitted throughout the semester were collected via a university-established learning platform. As the researcher aimed at examining the students' task engagement in multi-draft revision, how the students dealt with the feedback given by their instructor was given much emphasis. To help the students understand the comments more easily, the teacher made use of Comments, a Microsoft Word application, to point out the weaknesses and problematic areas in students' essays, and feedback was provided electronically.

Throughout the semester, all 28 students were required to complete four writing projects, and each project involved three drafts. To gain a better understanding of students' task engagement in revision, the records of draft revision were retrieved. That is, the data which were used to investigate the students' task engagement covered the first and final drafts of all four projects collected from 28 students, a total of 224 drafts.

In addition, an interview was carried out in the last phase after the results of the RAIs and task engagement were generated. In an ideal situation of autonomous learning, when a student has a high RAI, he/she has a high task engagement level. However, since autonomy does not represent a fixed state but a continuum of development, many factors can impact a learner's own evaluation of a certain learning goal and his/her regulatory behavior. Consequently, the learner may display a different level of autonomy. Under this circumstance, an interview was chosen as an additional tool for further tapping into the factors that might possibly influence a learner's learning motivation and task engagement.

Furthermore, there are two reasons for not administering a pre-test to this group of students. First, these 28 students did not have any previous experience in submitting multiple drafts for their writing projects. The researcher had confirmed with the participants about this point before this study began. Second, for most participants, their experience regarding teacher feedback on their writing was limited to either direct feedback, in which the students were informed of the correct expressions, grammar, punctuation, or word choice, or indirect feedback, in which the problems in their drafts were circled or highlighted.

Besides, this study made use of the totals of teacher feedback from the first draft to the third draft to calculate the students' task engagement levels in revision. To make sure the writing feedback was provided in a consistent and systematic manner, the instructor had, before this study began, practiced feedback revision for two consecutive years. The instructor chose to provide the students with indirect feedback, furnishing explanations on the errors detected in the students' drafts. All explanations were typed out in Comment boxes, a function embedded in Microsoft Word. The comments on errors were geared to help the students improve their grammatical, sentential, and structural accuracy. At the sentential level, the instructor's feedback focused on collocational expressions and phrases. Structurally, the students received suggestions regarding how to strengthen and improve their essay organization to meet genre requirements. All feedback comments were provided in boxes, and the students were instructed to read the instructor-provided explanations, correct their errors, and delete the boxes. With this revision sequence, the students were expected to guide themselves through a problem-solving process and learn how to better their writing.

### ***Research Findings***

This section of findings is organized in the sequence of the two research questions. Overall, the findings were quite positive, indicating that the students were motivated in learning how to improve the quality of their writing. They were also committed to investing more time and effort on revising their essays as well as shouldering the responsibility in becoming better writers.

#### ***LSRQ Results and Students' Motivation Levels***

The LSRQ was administered to these 28 students to examine their behavioral self-regulation (i.e., extrinsic and intrinsic motivation). Among the 14 questions asked, seven questions (1, 3, 6, 9, 11, 13, and 14) focused on exploring students' autonomous regulation of their learning behavior, specifically task engagement in revision. Another seven questions (2, 4, 5, 7, 8, 10, and 12) measured students' controlled regulation. Previously, Cronbach's alpha values for these two subscales were approximately .75 for controlled regulation and .80 for autonomous regulation (Black & Deci, 2000; Williams & Deci, 1996). In this study, Cronbach's alpha values for the controlled regulation and the autonomous regulations were .865 and .700 separately. Behaviors that are pressured by external contingencies (e.g., the concern

of being negatively viewed by others) are considered controlled. In contrast, statements related to autonomous regulation (e.g., participating in the writing assignments for wanting to master the language and become a critical thinker) measure the students' intrinsic motivation. The more controlled one's regulatory style, the larger its negative weight; the more autonomous one's regulatory style, the larger its positive weight.

To understand the factors that motivated the students to participate in writing assignments, Table 1 was compiled. The responses collected could be examined from three angles obtained from the Factor Analysis of the LSRQ. First, among the 14 questions, eight of them are related to why the students choose to participate in revision, follow the instructor's suggestions, and even continue to improve their writing skills. These questions cover statements 1, 3, 7, 9, 11, 12, 13, and 14, and the students were asked to respond to the factors that motivated them to participate actively in the writing assignments. A very high percentage (96.4%) of the students perceived writing as a good way to improve their analytical skills and to help them master the English language. In terms of their rationale for following the instructor's suggestions, 82.2% of the students wanted to be perceived as good writers, and all of them stressed the importance of doing well in writing. In addition, when asked about the reason for continuing to improve their writing skills, 100% of the students embraced the challenge to become good at analyzing issues and present the analyses through English writing; 96.4% of the students indicated a sense of pride gained from continuing to improve their writing; 92.9% felt it would be interesting to apply their English writing ability to their future career, and 82.1% of them agreed it was exciting to write on new topics to express different views and thoughts.

In the second component (related to Question 2 and Question 5) and the third component (related to Question 4 and Question 6), the students' responses showed that although their participation was grade-oriented, their motivation was still strongly linked to their desire of bettering their writing skills. To begin with, the students' responses to Question 2 indicated that only 3.6% of the students were concerned about being negatively perceived by others when failing to complete the assignments. Rather, 92.8% of them expressed that they would feel bad if they could not write well based on their responses to Question 4. Then although 85.8% of the students followed their instructor's suggestions because of their desire for a good grade, all of them made this decision because they believed the comments would help them write better. In this regard, the students seemed to have become conscientious in selecting the help they needed for reaching the goal of improving their writing.

Last, the students' responses to Question 8 and Question 10 revealed why they followed the instructor's suggestions. Among the 28 students, 64.2% of the students chose to revise their works not simply because following the instructor's directions was an easier approach but because they wanted to improve the quality of their writing. What can be inferred from the students' responses is that they made the conscientious decision of following the instructor's guidance in revising their compositions. Yet, all of the students pointed out that they would probably feel a sense of guilt had they chosen not to follow the instructor's suggestions. This unanimous response seemed to indicate that the instructor's suggestions exerted a very strong influence over the students' decision in revision.



Table 1 *Frequencies of Response (in%), Means and Standard Deviations for LSRO*

No.	Item Description	Scores and Frequencies <sup>a</sup>							Mean	SD
		1	2	3	4	5	6	7		
1.	I participate actively in writing assignments/revisions because I feel writing is a good way to improve my analytical skills and my understanding of different issues.	0	0	0	3.6	28.6	28.6	39.3	6.04	.922
2.	I participate actively in writing assignments/revisions because others would think badly of me if I fail to complete the assignments.	42.9	28.6	25.0	3.6	0	0	0	1.89	.916
3.	I participate actively in writing assignments/revisions because learning how to write well plays an important role in mastering the English language and becoming a critical thinker.	0	0	0	3.6	14.3	42.9	39.3	6.18	.819
4.	I participate actively in writing assignments/revisions because I would feel bad about myself if I couldn't write well.	0	3.6	3.6	10.7	21.4	39.3	21.4	5.54	1.261
5.	I am likely to follow my instructor's suggestions for doing the writing assignments/revisions because I will get a good grade if I do what she suggests.	0	7.1	7.1	32.1	21.4	32.1	0	4.64	1.224
6.	I am likely to follow my instructor's suggestions for doing the writing assignments/revisions because I believe my instructor's suggestions will help me write better.	0	0	0	0	7.1	50.0	42.9	6.36	.621
7.	I am likely to follow my instructor's suggestions for doing the writing assignments/revisions because I want others to think I am a good writer.	0	7.1	10.7	42.9	25.0	14.3	0	4.29	1.084
8.	I am likely to follow my instructor's suggestions because it is easier to do what I am told than to think about it.	10.7	7.1	46.4	32.1	3.6	0	0	3.11	.994
9.	I am likely to follow my instructor's suggestions because it is important for me to do well in writing.	0	0	0	3.6	28.6	42.9	25.0	5.89	.832
10.	I am likely to follow my instructor's suggestions because I would probably feel guilty if I didn't comply with my instructor's comments.	0	0	0	3.6	28.6	42.9	25.0	3.61	1.286
11.	The reason that I will continue to broaden/improve my writing skills is because it is exciting to write on new topics to express my views and thoughts.	0	0	3.6	14.3	25.0	35.7	21.4	5.57	1.103
12.	The reason that I will continue to broaden/improve my writing skills is because I would feel proud if I did continue improving my writing skills.	0	0	0	3.6	35.7	14.3	46.4	6.04	.999
13.	The reason that I will continue to broaden/improve my writing skills is because it is a challenge to become really good at analyzing issues and presenting the analyses in English writing.	0	0	0	0	32.1	28.6	39.3	6.07	.858
14.	The reason that I will continue to broaden/improve my writing skills is because it is interesting to apply my English writing ability in my future career.	0	0	0	7.1	25.0	28.6	39.3	6.00	.981

*Note.* The percentage has been rounded to the nearest whole number.

The percentages may not add to one hundred due to rounding.

a: 1 = Not True at All, 4 = Somewhat True, 7 = Very True. M = Mean, SD = Standardized Deviation.

*Relationship between RAI Values and Students' Task Engagement*

To understand the relationship between the students' RAI levels and their task engagement in revision, the RAI values were calculated and the draft records retrieved. First, the RAI values were calculated by subtracting the controlled subscale score from the autonomous subscale score to show the level of an autonomous behavior. The RAI values of the 28 participants were compiled into Table 2. The RAI values were arranged from high to low, with 3.29 as the highest and 0.57 as the lowest. The fact that all these values were positive signals the students were autonomous in the concerned behavior of revision engagement.

Table 2 *RAI Values Calculated from the LSRO*

Participants	Autonomous Regulation	Controlled Regulation	Relative Autonomy Index
1	6.86	3.57	3.29
2	6.71	3.71	3.00
3	5.86	2.86	3.00
4	5.57	2.71	2.86
5	7.00	4.14	2.86
6	6.57	3.86	2.71
7	6.57	4.14	2.43
8	6.71	4.43	2.28
9	5.86	3.58	2.28
10	6.57	4.43	2.14
11	6.86	4.86	2.00
12	4.57	2.57	2.00
13	6.71	4.85	1.86
14	5.57	3.71	1.86
15	6.00	4.14	1.86
16	6.57	4.86	1.71
17	6.57	4.86	1.71
18	5.57	3.86	1.71
19	6.43	4.86	1.57
20	5.43	3.86	1.57
21	5.71	4.28	1.43
22	6.14	4.85	1.29
23	6.00	4.86	1.14
24	5.29	4.29	1.00
25	5.43	4.43	1.00
26	5.71	4.86	0.85
27	5.14	4.43	0.71
28	5.14	4.57	0.57

To further examine the relationship between the students' RAI levels and their task engagement, the revision records were compiled into Table 3. Table 3 contains the total amount of teacher feedback each student received in his/her first draft and final draft of each project. Take Participant 1 for example. She received a total of 47 comments in her first draft of Project 1 but was able to address and correct the problematic issues in her revision to reduce the total number of comments to 23 in the final draft. The same interpretation goes for other students' drafts.

Table 3 *Tallies of Teacher Feedback in First and Final Drafts of Four Projects*

Participants	Project 1		Project 2		Project 3		Project 4	
	D1	D3	D1	D3	D1	D3	D1	D3
1	47	23	76	11	98	18	70	13
2	86	12	84	8	82	19	94	12
3	43	17	38	15	45	4	68	10
4	30	8	35	14	44	8	25	12
5	39	12	45	15	66	9	51	9
6	39	14	40	7	25	4	47	2
7	58	19	83	10	98	9	64	5
8	76	15	103	17	104	12	116	11
9	53	7	68	16	49	8	64	2
10	38	22	24	7	37	2	35	10
11	56	10	56	5	68	5	60	8
12	43	12	43	24	49	15	64	19
13	71	14	134	11	134	14	103	10
14	43	29	54	12	81	13	51	5
15	41	14	94	8	95	17	106	9
16	26	8	81	6	68	8	95	3
17	55	36	79	19	39	13	56	18
18	24	27	43	39	54	18	60	13
19	26	22	36	6	54	18	57	12
20	78	21	48	21	74	26	55	17
21	38	14	63	26	108	25	47	13
22	41	9	66	12	62	10	63	9
23	59	19	113	20	75	10	91	22
24	79	10	19	7	63	11	87	8
25	69	18	64	9	84	8	60	0
26	57	7	54	6	73	9	86	10
27	69	17	73	16	63	22	53	20
28	40	12	84	8	66	6	61	8

Then, in order to put these figures into perspective, the percentages for the students' reduction in teacher-provided corrective feedback were calculated and compiled into Table 4. In Table 4, the reduction rate was calculated in the following steps. First, the number of comments in the first draft subtracted the number of comments in the final draft. Then that total of difference in comments was divided by the number of comments in the first draft. For the details of all 28 students' reduction percentages of corrective feedback, please refer to Table 4.

Table 4 *Reduction Percentages in Feedback from First Draft to Final Draft*

Participants	Reduction Percentages				Participants	Reduction Percentages			
	P1(%)	P2(%)	P3(%)	P4(%)		P1(%)	P2(%)	P3(%)	P4(%)
1	51	86	82	81	15	66	91	86	92
2	86	90	77	87	16 <sup>b</sup>	69	93	88	97
3	60	61	91	85	17	35	76	67	68
4 <sup>a</sup>	73	60	82	52	18	-13	9	67	78
5	69	67	86	82	19	15	83	67	79
6	64	83	84	96	20	73	56	65	69
7	67	88	91	92	21	63	59	77	72
8	80	83	88	91	22 <sup>c</sup>	78	82	84	86
9	87	76	84	97	23 <sup>c</sup>	68	82	87	76
10 <sup>a</sup>	42	71	95	71	24 <sup>c</sup>	87	63	83	91
11	82	91	93	87	25 <sup>c</sup>	74	86	90	100
12 <sup>a</sup>	72	44	69	70	26 <sup>c</sup>	88	89	88	88
13	80	92	90	90	27	75	78	65	62
14	33	84	78	90	28 <sup>c</sup>	70	90	91	87

<sup>a</sup> The first group for further discussion.

<sup>b</sup> The second group for further discussion.

<sup>c</sup> The third group for further discussion.

After the reduction percentages of teacher feedback from Draft 1 to Draft 3 were calculated and compiled into Table 4, the previously calculated RAI values were incorporated into Table 4 to form Table 5, providing a more complete picture about the students' self-regulatory behaviors. When the students' RAI levels were taken into consideration in the interpretation of their task engagement in revision, two groups of students stood out immediately. The first group of students (participants 1, 2, 3, 5, 6, 7, 8, 9, 11, 13, 14, and 15) performed quite consistently throughout the four projects, with a lower percentage in Project 1 but more consistent performance from Project 2 to Project 4. All these 12 students had an RAI level higher than 1.85. Another group (participants 17, 18, 19, 20, 21, and 27) also showed a consistency between their RAIs and their task engagement levels. However, they were different from the first group. In the second group, the RAIs of these six students were lower (ranging mainly from 1.43 to 1.71, with only Participant 27's RAI at 0.71), and their task engagement levels were satisfactory but not high. Among the 28 students, 10 students displayed an inconsistency between their RAIs and their task engagement levels. The first sub-group was composed of the students who had high RAIs but comparatively lower task engagement. The students in this group were participants 4, 10, and 12. In the second sub-group, there was only one student, Participant 16, who had an RAI of 1.71 but much higher task engagement. In the last sub-group, six students, including participants 22, 23, 24, 25, 26, and 28, demonstrated low RAIs (ranging from 0.57 to 1.29) but high task engagement.

Table 5 *Students' RAI Levels and Their Reduction Percentages in Feedback*

Table 5. Students' LRI Levels and Their Reduction Percentages in Feedback											
Participants		Reduction Percentages				Participants		Reduction Percentages			
		P1(%)	P2(%)	P3(%)	P4(%)			P1(%)	P2(%)	P3(%)	P4(%)
1	3.29	51	86	82	81	15	1.86	66	91	86	92
2	3.00	86	90	77	87	16 <sup>b</sup>	1.71	69	93	88	97
3	3.00	60	61	91	85	17	1.71	35	76	67	68
4 <sup>a</sup>	2.86	73	60	82	52	18	1.71	-13	9	67	78
5	2.86	69	67	86	82	19	1.57	15	83	67	79
6	2.71	64	83	84	96	20	1.57	73	56	65	69
7	2.43	67	88	91	92	21	1.43	63	59	77	72
8	2.28	80	83	88	91	22 <sup>c</sup>	1.29	78	82	84	86
9	2.28	87	76	84	97	23 <sup>c</sup>	1.14	68	82	87	76
10 <sup>a</sup>	2.14	42	71	95	71	24 <sup>c</sup>	1.00	87	63	83	91
11	2.00	82	91	93	87	25 <sup>c</sup>	1.00	74	86	90	100
12 <sup>a</sup>	2.00	72	44	69	70	26 <sup>c</sup>	0.85	88	89	88	88
13	1.86	80	92	90	90	27	0.71	75	78	65	62
14	1.86	33	84	78	90	28 <sup>c</sup>	0.57	70	90	91	87

<sup>a</sup> The first group for further discussion.

<sup>b</sup> The second group for further discussion.

<sup>c</sup> The third group for further discussion.

To gain a better understanding of the learning attitudes of the students who have been identified in Table 5 as having inconsistency between their RAIs and their task engagement, further interviews were conducted. These identified students included those with comparatively higher RAIs (higher than 1.71) but a moderate level of task engagement (participants 4, 10, and 12), a student with a relatively lower RAI but high task engagement (Participant 16), and those with low RAIs (less than 1.30) but very high task engagement (participants 22, 23, 24, 25, 26, and 28). Only one question was posed in the interview, but the students in these three groups were asked different questions. For example, for participants 4, 10 and 12, they were asked if they knew why their task engagement levels of the four projects fluctuated. For Participant 16, the question was specifically about his/her reserved attitude shown in the LSRQ and his/her actual task engagement level. Last, for participants 22, 23, 24, 25, 26, and 28, the question was about the gap between their own assessment of reasons for participating in writing assignments and their actual task engagement levels in the semester.

The responses from the first group (three students) were related to writing genre, semester load, and personal preference. For instance, Participant 10 was very candid about the fact that her writing engagement levels were often influenced by her school life and extracurricular activities. Take her P1, P2 and P4 for example. At the beginning of the semester, she did not know how to revise her work, so her task engagement level in P1 was low. Then the timelines for the last drafts of these two projects coincided with her midterm and final weeks. As a student with double majors, she just "did not have much time to address all the comments raised by the instructor." In addition, for participants 4 and 12, although they both acknowledged the importance of writing and would like to improve their writing skills, Participant 4's task engagement level was often influenced by genre, whereas Participant 12 was studying for the transfer exam to another department, impacting their engagement levels.

Next, the second group only included Participant 16. When asked about her own rationale for participating in the writing assignments, Participant 16 explained her responses to a Likert-scale survey. In her words, I don't usually choose extreme answers because I don't feel that strong about the statements listed in the questionnaire. From 1 to 7, I often choose those numbers in the middle. However, if you asked me whether I liked writing or revision, I could tell you that the answer is definitely a 'yes.' I really like to receive my teacher's feedback and I would try to fix all the problems to which she had provided comments. Her explanation revealed why her RAI value was not high, but her task engagement was high.

Last but not least, for participants 22, 23, 24, 25, 26, and 28, the answers to their low RAIs were mainly related to the fact that these students did not associate English writing ability with its future applications. In other words, these students did not take into consideration the factors, such as strengthening their analytical skills, cultivating a sense of pride, expressing their thoughts in English, or applying the writing skills to their future jobs, when they responded to the survey. Yet, when they were in

the semester and learned how to write and revise their works, these students expressed a very strong sense of responsibility. In Participant 24's case, he took this course for meeting the requirement of minoring in foreign languages. As a poor grade would negatively affect his overall GPA, he understood the importance of revising his works. For the other five students, they viewed performing well in a writing course as important because they *majored* in English. In Participant 23's words, "the teacher's comments were clear and helped me understand my weaknesses, so I didn't mind spending the time addressing all the issues in my essays." Participant 26 said, "I think of revision as my responsibility because my teacher has done her part and I should do my part, too." In conclusion, although the students were extrinsically motivated, they seemed to have developed the awareness of taking up the responsibility for improving their writing skills.

### *Conclusions, Limitations, and Implications*

This study has generated encouraging results. First of all, the results from the LSRQ positively reflected the students' attitudes about participating in writing assignments and revisions, an indicator for not only the students' potentially active participation in the course but also their development of self-regulatory behavior, the condition indicating their development of autonomy. The findings pointed out that a majority of these students (92.9%) were keenly aware of the importance of writing to both their English proficiency and their future career. Moreover, they (96.4%) recognized writing as a good way to show their analytical skills and critical thinking ability. For the researcher, these findings further confirm the necessity of two important elements in guiding students' self-regulatory behaviors. First, to help students learn how to revise their works, teacher-provided feedback is of great importance. More importantly, a process-oriented approach enables learners to become more invested in their own improvement. The former provides the opportunity to encourage teacher-student communication, while the latter helps learners to invest more time and effort in their revisions.

One limit present in this study is associated with whether students' self-regulatory behaviors could be cultivated or maintained in a controlled manner without any outside influences. More specifically, although the findings generated from this study have shown a positive relationship between the students' RAIs and their task engagement levels, it is difficult to exclude other factors which may have impacted their self-regulatory behaviors. In a semester, college students typically take many courses either to fulfill their academic requirement or to broaden their horizons. Such a condition is not likely to be manipulated or ruled out totally. However, in the semester which this study was conducted, the students only had this writing course. Although other English courses had assignments, writing ones were limited to only midterms and finals. The development of one's self-regulatory behaviors is not achieved in a vacuum; in other words, the influences from other variables can only be minimized but not totally eliminated.

Though this study only covered 28 students, this size of student body is relatively large for a writing study employing a multi-drafting design. In writing-related research, a common challenge is that most instructors try to keep their classes small for sufficient time in instruction and feedback-provision. The same dilemma was also present in this study. Despite the small size of 28, the results generated from this study hope not only to stimulate more interests in different approaches for learners to become more motivated and autonomous as well as shoulder more responsibility in their learning, but also to provide encouragement to writing researchers and instructors. When students are guided step by step to realize that their improvement actually lies in their hands, they *will* become more autonomous learners.

This study has inspired several directions for future studies. For instance, more efforts may be directed to exploring the different types of behavioral regulations, including external regulation, introjected regulation, identified regulation, and integrated regulation (Deci & Ryan, 1985). Another interesting possibility is to explore how students respond to different types of writing assignments, such as journal writing, in-class timed writing, or even creative writing, to see how students' motivation levels relate to their autonomy levels.

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收 稿 日 期：2015 年 07 月 28 日

一稿修訂日期：2015 年 08 月 18 日

二稿修訂日期：2015 年 12 月 23 日

三稿修訂日期：2016 年 02 月 02 日

接受刊登日期：2016 年 02 月 02 日

國立臺灣師範大學教育心理與輔導學系  
教育心理學報，2017，48 卷，3 期，449-467 頁

# 英作課程實施成效：學習者態度及自我調整如何影響其多稿寫作之過程

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本文著重探討大學生英文寫作之學習，主要檢視其自我調整程度及學習投入程度之間的關係。本研究設計以台灣北部某一國立大學應用外語系的學生為研究主體，共 28 人，寫作課程採多稿設計，學生們在一學期 18 週中，須完成四個文體寫作，每個文體須採三稿制，教師在每稿均提供反饋，學生藉由了解教師反饋、進行修稿，來精進自身的英文寫作。本研究探討兩個問題，首先透過自我決定理論問卷，來檢視大學生參與英文多稿寫作的動機因素，並透過問卷結果計算出學生個人的相對自主指數，藉以檢視學生參與寫作、修稿的原因為何？第二，本研究檢視學生一稿到三稿所接到的教師評語回饋減少程度，藉此探討學生在修稿方面的投入程度，總共檢視 224 份文稿。研究結果發現，絕大部分學生積極參與英文寫作及修稿是因為想要增進自身的分析能力、英文寫作能力，並希望對其未來生涯有所助益。另外，在 28 位學生中，有 18 位學生的「相對自主指數」與其「自我調整行為」顯示強烈的一致性，學生「相對自主指數」的高低，可以對應到他們「自我調整行為」的高低，進一步的訪談結果顯示學生的學期課程負荷量、個人課外活動多寡、對文體的喜好程度，都會影響他們在寫作、修稿時的投入程度。

**關鍵詞：**自我調整行為、相對自主指數、學習自主、學習者態度