Abstract
Self-regulation integrates learning behaviors or strategies, motivation, and metacognition. In the context of academic writing, it is believed that self-regulation, as manifested through self-reflective and self-evaluative activities, may predict one’s writing success. The present paper aims to develop a self-regulation scale contextualized in written communication skills. It made use of Zimmerman’s (2002) characterization of the self-regulation processes namely: (1) setting specific proximal goals for oneself, (2) adopting powerful strategies for attaining the goals, (3) monitoring one’s performance selectively for signs of progress, (4) restructuring one’s physical and social context to make it compatible with one’s goals, (5) managing one’s time use efficiently, (6) self-evaluating one’s method, (7) attributing causation to results, and (8) adapting future methods. It was found that these perceived eight factors of self-regulation can be better concretized if placed under the three-stage model of self-regulation which involves the forethought phase, the performance phase, and the reflection phase.

It is known that self-regulation indeed develops autonomous learners that are responsible for their own learning. In a general sense, self-regulation is any thought, action or feelings towards attaining educational goals and is evidently the management of one’s own thinking. In the writing, self-regulation entails several stages which initially starts from goal setting and terminates at the adaptation of future methods. In this consideration, this paper aims to create a self-regulation scale that caters to the writing discipline. Moreover, the paper intends to analyze the self-regulation in writing of undergraduate students.

Self-Regulation and Writing

A study related to self regulation was done by Zimmerman and Bandura (1994). It discussed the outcomes of self-regulatory influence on the success in a writing course. According to the researchers, self-regulation functions through an array of psychological sub functions for instance self-monitoring of one’s activity, applying personal standards for judging and directing one’s performances, enlisting self-reactive influences to guide and motivate one’s effort, and employing appropriate strategies to achieve success. Also, it is not automatic that when one has self-regulatory skills the person applies it in the midst of difficulties, stressors or competing attraction. With that upheld, students register the highest sense of efficacy to manage the content aspects of instruction, but a low sense of efficacy to
manage themselves to get their activities done. In their study, the participants were 95 freshmen students from a highly selective university and had an age range of 17 to 20 years old; 47 were enrolled in a regular class and 48 attended the advance classes. The researchers administered the measures of different self-regulatory factors to the students at the beginning of the academic quarter and the instructor provided the final grades at the end of the academic quarter as a measure of the student’s writing attainment. The outcome of the study signified that the different facets of self-efficacy played a big role in the attainment in the writing course which in turn augment the goals that the students have placed for themselves and the quality of writing with which they would be pleased. Lastly, it was suggested that self-regulative strategies that maintain intention by means of self-enhanced concentration, task management, and completion are crucial for success academically.

Singer and Bashir (1999) conducted a research which also made use of the self-regulated approach in dealing with oral and written communication skills. This intervention was implemented on one sixteen year old student with some speech-language evaluation. Singer and Bashir believe that strategies for speaking and writing are correlated with the three sub-processes of self-regulation. The student, George, learned to recognize the feeling that he experienced when dealing with ineffective verbal expression such as anxiety, louder volume, and pitch through self-reflection and self-evaluation strategies which the researchers taught him. George’s ability to become more self-regulated progressed rapidly. By the end of that school year, George’s communication skills improved.

Plata (2008) did a similar study regarding the use of self-regulation as a strategy in language learning. She explored Freshman Composition students’ reflection in their journals to find out the role of the three-stage model of self-regulatory prompts in student’s learning and metacognition. She collected 47 journals from two classes comprising of 22 Liberal Arts students and 25 from Engineering. Her study revealed that giving students prompts that manifest the cycle of self-regulation can increase student’s awareness of their learning. Results of the study also indicate that the prompts not only give students the experience of minding their own thinking but also making them aware of the depth and breadth of their learning experience.

**Scale in Self-Regulation in Writing**

Hamman (2005) created a self-regulation scale in writing in which the data collected were already part of a regular course requirement, but only the students who gave consent had their measures used in the data analysis. There were 82 participants of the study, 69 females and 13 males at a large Midwestern University. This study was constructed as a descriptive study to examine beginning education majors’ beliefs about writing and epistemology, as well as their reported self-regulatory behaviors. The study was initiated for gaining better understanding about students’ attitudes about writing and learning, and as well as determining if these beliefs were related to self-regulated behaviors in writing tasks. It was hoped that the results from this study would provide the College of Education with knowledge for
course instructors to better support students in writing tasks, as well as to lead to continued research in this area.

**Self-Regulation and Acquiring Revision Skills**

Zimmerman and Kitsantas (1999) conducted a study regarding the use of strategies in writing. Their participants in their study are eighty-four female high school students coming from a parochial school with ages ranging from 14 to 17 years old. Most of the participants are coming from the middle class and from different ethnic background. The task administered by the researchers was sentence-combination; specifically, twelve writing revision problems consisting of 6 to 10 kernel sentences adapted from Strong (1981). The study focused on the three goal setting techniques namely: process goal, outcome goal and shifting process-outcome goal. The students were divided into two groups; the experimental groups were based on the three types of goal setting and the two variations in self-recording. The eighty four participants were assigned to six experimental conditions with 12 participants in each group. The conditions are as follows for the experimental group: (a) outcome goal but no self-recording, (b) outcome goal with self-recording, (c) process goal but no self-recording, (d) outcome goal with self-recording, (e) shifting goal with self-recording, (f) shifting goals with self-recording, (g) practice only control group (no goal setting or self-recording). The results revealed that setting process and outcome goals structurally did create improved self-motivation. Establishing hierarchical goals affected the participant's ascription for unsatisfactory revision operation. Conclusively, the researchers strongly believed that the students require social guidance during the preliminary levels of learning complex skills to accustom them to employ in optimally efficient self-directed performance. At the end, it was discovered that the participants who modified goals sequentially from process to outcome goals exceeded others who abide only to solely process or outcome goals.

Zimmerman and Kitsantas (2002) performed a study on the subject of modeling and feedback on the acquisition of writing revision. Their study delved on the effectiveness of teaching designed to optimize observational and emulative learning on the acquisition of writing revision proficiency, self-efficacy perceptions, intrinsic interest, and self-reactions. The participants of their study were 72 college students, 36 are male and 36 are female with predominantly Caucasian background. The mean ages of the participants were 19 years and 9 months; 41 students are freshmen, 26 are sophomores and 4 juniors. The writing task employed for the observational training, emulative or imitation practice and post testing is composed of writing-revision problems, each concerning 6 to 10 kernel sentences that the students were asked to merge into non-recurrent sentences. Also, the researchers made use of the following scales: (1) self-efficacy scale, (2) self-satisfaction scale and (3) intrinsic interest scale. The 72 students were randomly assigned to a group which comprises of 6 female and 6 males and were put into the following conditions (a) no modeling without social feedback, (b) no modeling with social feedback, (c) mastery modeling without social feedback, (d) mastery modally with social feedback, (e) coping modeling without social feedback, (f) coping modeling with social feedback. The outcome of the experiment demonstrated that
during the observational learning, students in the coping-model group exceeded those in the mastery model group and the mastery model group did better than the no-model control group. In due course, exposure to a coping model who struggled to put into practice a writing revision strategy, produced not only better observational learning but also more efficient practice experiences and finer acquisition during post testing than a mastery model or no model. This exemplary modeling experience also delves into superior forms of self-regulation such as greater self-satisfaction and intrinsic interest, than mastery models.

Method

Research Design

This study is predominantly an analysis of the scale that was created by the researchers. The analysis included a confirmatory factor analysis to verify whether the variables indeed show a relationship to its construct. Moreover, the reliability and validity of the scale were verified using different statistical measures such as Cronbach’s Alpha and the construct validity respectively.

Participants

The participants in this study were 300 undergraduate students with the ages ranging from eighteen (18) to twenty-two (22) taking up different academic programs at different universities in Manila. Among the participants, there were 92 males and 115 females. Most of the subjects were Filipino, and a very few were of different nationalities. Random sampling was utilized for the selection of the participants.

Materials

The self-regulation scale constructed by the researchers is based on the scale created by Zimmerman (2002) and is contextualized in the writing discipline. The items were checked by a language teaching professional who is a faculty of English and Applied Linguistics.

Item Writing

Items were created on the eight subscales of Zimmerman (2002). The subscales are as follows: (1) Setting specific goals for oneself which is the initial phase of the self-regulation cycle. This phase deals with the formulation of objectives that will be achieved for a specific task. (2) The second phase of the self-regulation cycle is restructuring one’s physical and social context to make it compatible to one’s goal indicates the use if imagery, self-instruction, attention-focusing and task strategies. (3) The adaptation of powerful strategies signifies how the individual utilizes appropriate strategies for a task in which the objectives will be achieved. (4) Monitoring one’s performance selectively for signs of progress refers to the ability of the individual to keep track of their progress in the task they are doing. (5) Managing one’s time efficiently refers to the strategies that individuals use
to fit their entire pending task to their availability. (6) Evaluation one’s method refers to the comparison of self-observed performances against some standard, such as one’s prior performance, another person’s performance, or an absolute standard of performance. (7) Attributing causation to result refers to the beliefs about the cause of one’s errors or successes. Last is (8) the adaptation of future methods which bring about the use of potential techniques that can be used to enhance output.

**Item Review**

The items were reviewed by a specialist of language teaching. The results of the item review indicate that the scale has 98 approved items. Two items were rejected from the goal setting of the scale and another 2 items were rejected from the time management phase. Items that were placed in the revision status are as follows: two from the goal setting phase, one from the restructuring of physical and social context, one for the attribution of causation to results and another one for the adaptation of future methods. The actual reviewed scale is in Appendix A of this paper.

**Procedures**

The researchers constructed a self-regulation scale which is contextualized on the writing discipline by means of the eight subscales by Zimmerman (2002) consisting of 110 items. After the scale was constructed, the items were analyzed by a faculty of English and Applied Linguistics. The scale underwent rigorous revision as recommended by the faculty who checked the items. The scale was administered to 300 random undergraduate students from different Universities. The data collected was encoded for basic analysis and later on for further scrutiny as exemplified by Confirmatory Factory Analysis. After conducting the CFA, the researchers revised the scale accordingly.

**Measures of Validity and Reliability**

**Cronbach’s Alpha.** The researchers used the Cronbach’s Alpha to check the reliability of the items of the self-regulation in writing scale. This method was utilized in order to estimate the internal consistency of the items. Moreover, it checked the consistency of the responses to all the items homogeneity of items. The computation for the Cronbach’s Alpha was done for each subscale, as well as for the overall scale. The researchers wanted to see if there is internal consistency amongst the items for very subscale, and so as consistency for the whole scale they created.

**Construct Validity.** This form of validity measures the extent to which the scale may be said the measure a theoretical construct or trait. Two forms of the construct validity were utilized in this study. The first one is through factor validity where in the researchers made use of the Confirmatory Factor Analysis which is generally utilized to assess the best factor structure or model of a particular
construct. Factor analysis is a mathematical procedure that comprise of arriving with sources of variation among the constructs concerned. Factor analysis reduces the number of variables and it detects the structure in the relationships between variables or classified variables. In this research, the parameter of the model is estimated and also the goodness of fit of the solution to the data is evaluated. This research also made use of convergent validity to observe the intercorrelation of all eight factors. The researchers expected a significant and positive correlation amongst the factors since they are perceived to be theoretically convergent. The researchers correlated each factors with one another.

Results

Internal Consistency

Table 1
Table summary of the computed Cronbach’s Alpha for the eight subscales and the overall construct

<table>
<thead>
<tr>
<th>Factors/Construct</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Cronbach’s Alpha</td>
<td>0.94</td>
</tr>
<tr>
<td>Goal-setting (GS)</td>
<td>0.77</td>
</tr>
<tr>
<td>Powerful strategies (PS)</td>
<td>0.74</td>
</tr>
<tr>
<td>Self-monitoring (SM)</td>
<td>0.76</td>
</tr>
<tr>
<td>Restructuring context (RS)</td>
<td>0.74</td>
</tr>
<tr>
<td>Time management (TM)</td>
<td>0.86</td>
</tr>
<tr>
<td>Self-evaluation (EM)</td>
<td>0.71</td>
</tr>
<tr>
<td>Attribution of causation to results (AC)</td>
<td>0.69</td>
</tr>
<tr>
<td>Adapting future methods (FM)</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Table 1 shows the summary of results for the computed Cronbach’s Alpha. The researchers computed for the Cronbach’s Alpha of the overall scale to check the internal consistency of all the responses to all the items. This particular computation resulted in a value of 0.94 which indicates that there is high internal consistency among the responses for the whole scale. We also solved for the Cronbach’s Alpha of each of the subscales to see if the responses for ever manifest variable are also internally consistent. For the first factor which is goal-setting (GS), the researchers got a value 0.77 which signifies that responses for the first manifest variable are acceptably consistent. The succeeding variables namely powerful strategies (PS), self-monitoring (SM), restructuring context (RS), and self-evaluation (EM) also resulted in similar values of Cronbach’s Alpha. PS, SM, RS, and EM garnered values of 0.74, 0.76, 0.74, and 0.71 respectively. These findings reveal that the responses for each of these sub-factors are also internally consistent. The manifest variables’ time management (TM) and adapting future methods (FM) got high values of Cronbach’s Alpha, resulting in computations of 0.86 and 0.84 respectively. This suggests that the internal consistency of the responses for these two factors is high. The lowest Cronbach’s Alpha computation among the factors
was achieved from attribution of causation to results (AC) which only resulted in 0.69. Although this implies that there is internal consistency amongst the responses for this factor, it is not as highly consistent as the other factors.

**Construct Validity**

**Table 2**

*Correlations amongst all the Factors of Self-regulation in Writing*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>4</th>
<th>5</th>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal setting</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Adopting powerful strategies</td>
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<td>-</td>
<td></td>
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<td></td>
</tr>
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<td>(2)</td>
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<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Self-monitoring and restructuring social context</td>
<td>.33*</td>
<td>.29*</td>
<td>-</td>
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<td></td>
<td></td>
<td></td>
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<tr>
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<td>.30*</td>
<td>.44*</td>
<td>-</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time management</td>
<td>.40*</td>
<td>.36*</td>
<td>.44*</td>
<td>.51*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Self-evaluation and attributing causation to results</td>
<td>.53*</td>
<td>.41*</td>
<td>.41*</td>
<td>.37*</td>
<td>.44*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-evaluation</td>
<td>.24*</td>
<td>.24*</td>
<td>.34*</td>
<td>.34*</td>
<td>.42*</td>
<td>.50*</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Attributing causation to results</td>
<td>.39*</td>
<td>.38*</td>
<td>.40*</td>
<td>.50*</td>
<td>.50*</td>
<td>.50*</td>
<td>.51*</td>
<td>-</td>
</tr>
<tr>
<td>Adapting future methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.05*

Table 2 signifies that all of the eight hypothesized factors for self-regulation correlate with each other. The computed correlation resulted in positive and significant values which reveal that there is convergence among all the hypothesized factors. Also, it represents that as each of the factor increases, all the other factors it was correlated with also increases. It also indicates a high validity for the perceived manifest variables of self-regulation in writing. The constructs are intercorrelated as identified in the theory used by the researchers.
**Factor Analysis**

**Figure 1**

*Model 1 for self-regulation in writing (Eight Factor model)*

![Diagram of Model 1](image)

**Figure 2**

*Model 2 for self-regulation in writing (Three factor model)*

![Diagram of Model 2](image)

**Note**

- **GS**- Setting proximal goals for oneself
- **PS**- Adopting powerful strategies for attaining the goals
- **SM**- Monitoring one’s performance selectively for signs of progress
- **RS**- Restructuring one’s physical and social context to make it compatible to one’s goals
- **TM**- Managing one’s time efficiently
- **EM**- Evaluating one’s method
- **AC**- Attributing causation to results
- **FM**- Adapting future methods
Table 2
Basic Summary Statistics for Model 2 (Three-factor model)

<table>
<thead>
<tr>
<th>Path</th>
<th>Estimate</th>
<th>SE</th>
<th>CR</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>forethought &lt;-&gt; performance</td>
<td>0.17</td>
<td>0.02</td>
<td>9.86</td>
<td>***</td>
</tr>
<tr>
<td>reflection &lt;-&gt; performance</td>
<td>0.17</td>
<td>0.02</td>
<td>9.94</td>
<td>***</td>
</tr>
<tr>
<td>reflection &lt;-&gt; forethought</td>
<td>0.17</td>
<td>0.02</td>
<td>9.92</td>
<td>***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Path</th>
<th>Estimate</th>
<th>SE</th>
<th>CR</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal-Setting (GS)</td>
<td>3.20</td>
<td>0.03</td>
<td>110.548</td>
<td>***</td>
</tr>
<tr>
<td>Adopting powerful strategies (PS)</td>
<td>3.20</td>
<td>0.03</td>
<td>108.156</td>
<td>***</td>
</tr>
<tr>
<td>Self-Monitoring (SM)</td>
<td>3.16</td>
<td>0.03</td>
<td>106.044</td>
<td>***</td>
</tr>
<tr>
<td>Restructuring physical and social context (RC)</td>
<td>3.17</td>
<td>0.03</td>
<td>105.755</td>
<td>***</td>
</tr>
<tr>
<td>Time Management (TM)</td>
<td>3.16</td>
<td>0.03</td>
<td>106.887</td>
<td>***</td>
</tr>
<tr>
<td>Self-Evaluation (EM)</td>
<td>3.17</td>
<td>0.03</td>
<td>108.674</td>
<td>***</td>
</tr>
<tr>
<td>Adopting future methods (FM)</td>
<td>3.17</td>
<td>0.03</td>
<td>106.718</td>
<td>***</td>
</tr>
</tbody>
</table>

The results in the factor analysis using the Confirmatory Factor Analysis revealed that Model 2 is a better model than Model 1. This indicates that self-regulation is better concretized if it is divided into its three-stage cycle namely: (1) forethought phase, (2) performance phase and, (3) reflection phase. Also, in the second model, one of the eight factors which is the attribution of causation to results was removed because it contributed unconstructively to the goodness of fit measures of the first model as discussed in the succeeding sections. These three factors resulted in parameter estimates of 0.168, 0.172, and 0.166 respectively, and are all considered significant. Its original eight sub-factors also resulted in significant parameter estimates. Goal-setting (GS) loads to self-regulation by 3.195, adopting powerful strategies (PS) by 3.199, self-monitoring (SM) by 3.164, restructuring context (RS) by 3.165, time management (TM) by 3.158, self-evaluation (EM) by 3.165, and adopting future methods (FM) by 3.165. Figure 4 also reveals that 2.9 % of the time, GS and EM each contributes to self-regulation that is not shared by other factors, and 3.0 % of the time, PS, SM, RS, TM, and FM each contributes to self-regulation that is not shared by other factors. From the results, it can be presumed that self-regulation is best measured using the three-stage cycle, having seven (7) more underlying factors.
Table 3

<table>
<thead>
<tr>
<th></th>
<th>NFI</th>
<th>RFI</th>
<th>IFI</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Model</td>
<td>.80</td>
<td>.64</td>
<td>.80</td>
<td>.80</td>
<td>.80</td>
</tr>
<tr>
<td>Saturated Model</td>
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<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Model</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
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</tr>
</tbody>
</table>

Table 3 reveals the summary of the goodness of fit indices for the first proposed model for self-regulation in writing. The researchers chose the baseline model comparison to contrast this model to another parallel measurement model. For the NFI an adequate fit is above .8 or .9. The NFI or the Bentler-Bonett normed fit index for this model is .739 which is unacceptable. The RFI or the Relative Fit Index for this model is .639. In estimations, the RFI manipulates the Bentler-Bonett normed fit index by dividing discrepancy values by the hypothesized or baseline models. A coefficient that is bordering to 1 is considered desirable or has a good fit. In the model, the RFI is .639 which indicates that the fit is undesirable. On the other hand, the IFI or the incremental fit index garnered for the model is .802. The IFI can range above 1.0 but the acceptable fit is judged to be close to 1.0 and above .90. An RFI of .802 signifies that the fit is unacceptable also. The TLI or the Tucker-Lewis index minimizes the influence of sample size on the obtained values and adjust the NFI by the complexity of the model. The value of the TLI is not limited to a 0 to 1 range but values close to 1 are considered as an acceptable or a good fit. For this model, the TLI is .634 which in turn suggests that the model has a deficient fit. Last is the CFI or the comparative fit index which indicates the percentage to which the data covariance can be reproduced by the hypothesized model. The acceptable value for the comparative fit index which indicates that the model is reliable is .90. The CFI for this model is .801 which also indicates the model has a poor fit. Due to the acquired values for goodness of fit for model 1, it can be considered that the model indeed has a bad fit. For this reason, the researchers proposed another model for self-regulation in writing which can be seen on Figure 3.

Table 4. Goodness of fit indices for Model 2

<table>
<thead>
<tr>
<th></th>
<th>NFI</th>
<th>RFI</th>
<th>IFI</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
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<td>Default Model</td>
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<td>.71</td>
<td>.89</td>
<td>.71</td>
<td>.89</td>
</tr>
<tr>
<td>Saturated Model</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Model</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>

Table 4 signifies that the second model shows a better fit if not optimal as compared to the first model of self-regulation in writing. The researchers attempted to remove one factor which is AC (Attributing causation to results) because in the previous model it yielded the lowest factor loading. The NFI for model 2 is .886 as
compared to the first model’s NFI which is .799. The NFI for this model has increased by .067. The RFI indicated in this model is .710 which is better when weighted against model 1’s RFI which is .639. There is a .071 augmentation to this goodness of fit index. Next is the IFI which is .888 for model 2, judge against the IFI value for model 1 which is .802; there is a .052 improvement. The TLI, alternatively, for this model is .713 as compared to the TLI of the first model which is .643; there is an increment of .07. Last, the CFI value for this model is .887 in disparity with model 1 which is .801; there is a .086 growth in this goodness of fit. As we can see from the two models, the second model has an overall greater goodness of fit. Still, the goodness of fit values for model 2 is not optimal as the researchers expected. The researchers recognized that there is a need to place the remaining subscales under the three self-regulation cycle. In this manner, the eight factors of self-regulation are better concretized as compared to placing the eight factors under one latent variable.

**Discussion**

Initially, Zimmerman (2002) proposed 8 factors for self-regulated learning in a general context. For the writing milieu, it can be derived that only seven out of the eight factors highly measures self-regulation. There is a strong possibility that attributing causation to results in writing does not entail self-regulation in writing. In a similar case, Zimmerman and Pons (1986) concluded that one of supposed factors of self-regulation which is self-evaluation did not relate to student achievement in their study but the researchers firmly believed that it is and important self-regulating strategy.

The first model of self-regulation did not fit in the context of writing because the factors were not grouped accordingly. According to the self-regulation theory by Zimmerman (2002), there are three main phase of self-regulation namely the forethought phase, performance phase and the reflection phase. Without this assemblage of the factors, there will be inconsistencies regarding what each factor is trying to measure.

In conclusion, the researchers establish a foundation that the factors of self-regulation should be placed in the three phases of self-regulation respectively. Moreover, the AC (attributing causation to result) factor is not a significant contributor of self-regulation based on the analysis. The first model inadequately measured self-regulation of writing but the second model showed that modifications in the model can result to better measurement of self-regulation. The internal consistency the overall items is high and internal consistency of each factor is acceptable. This suggests that the items are internally consistent, reliable and homogenous.

In the succeeding studies on self-regulation, there should be a larger number of participants to make the study more definitive. Currently, the number of participant in this study is 207; the following studies should make it at least 300 participants or more to make the data well-established. Also, other researchers should construct other self-regulation scales in the other language macro skills like speaking, listening and reading in order to find a definitive link for self-regulation and language learning.
References


Appendix

**Self-regulation Scale in Writing**

Setting specific proximal goals for oneself – this segment of self-regulation deals with the formulation of objectives that will be achieved for a specific task.

1. Before I write, I set my mind that I would finish my written output.
2. I set standards for my writing.
3. I create certain goals for every writing task I need to accomplish.
4. I plan the contents of the things that I would write.
5. I make my own guidelines for my written output.
6. I take note of my purpose in a specific writing task.
7. I think of my target audience and reason for writing a certain piece.
8. I drive myself to be resourceful in my writing.
9. I set a specific time in which I would write.
10. I always intend to make my written outputs of high quality.
11. I visualize my written output first before engaging in it.
12. I have a certain length in mind for the paper that I will work on.
13. I aim to create a paper with no grammatical errors.
14. I aspire to create a paper that will satisfy the readers.
15. I seek to compose a paper that uses comprehensible vocabulary.
Adopting powerful strategies for attaining the goals- This phase of self-regulation entails that the individual utilizes appropriate strategies for a task in which the objectives will be achieved.

1. I brainstorm for ideas before I write.
2. I use graphic organizers to manage my ideas.
3. I use the free-writing strategy to garner several thoughts.
4. I create an outline before I write.
5. I create a draft before writing the final paper.
6. I modify my paper if I’m not contented with it.
7. I use certain writing strategies such as annotating, outlining, etc. whenever doing a writing task.
8. I proofread my work.
9. I ask my peers to edit my writing.
10. I ask professionals to evaluate my writing and give suggested revision
11. I use word processing software to check errors in my writing.
12. I reread my work several times to find some errors in my writing.
13. I check my work on the general level then to the sentence level.
14. I know and use the writing approach of planning, organizing, writing, editing and revising.
15. I take into consideration the comments of other people about my writing.

Monitoring one’s performance selectively for signs of progress- self-monitoring is one of the phases in the self-regulation cycle. It refers to the ability of the students to keep track of their progress in the task they are doing.

1. Before I write, I set my mind that I would finish my written output.
2. I set standards for my writing.
3. I create certain goals for every writing task I need to accomplish.
4. I plan the contents of the things that I would write.
5. I make my own guidelines for my written output.
6. I take note of my purpose in a specific writing task.
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Restructuring one’s physical and social context to make it compatible to one’s goal. Among the key types of self-control methods that have been studied to date are the use of imagery, self-instruction, attention focusing, and task strategies.

1. I avoid watching television when I am finishing a writing task.
2. I avoid using my cell phone whenever I am writing a composition.
3. I usually finish my writing tasks late at night.
4. I isolate myself in quiet places whenever I do my writing tasks.
5. I can write efficiently when I am working in a clean and quiet environment.
6. I am able to finish a writing task when I am listening to music.
7. I like talking with my friends while doing a writing task.
8. I prefer having people or friends around when I write so that I can gather more ideas from them.
9. I don’t let others disturb me when I am writing.
10. I like finishing my compositions early in the morning.
11. I accomplish all my writing tasks at my own pace.
12. I see to it that my things are fixed before I begin with writing.
13. I usually do my writing tasks in a quiet place where there isn’t much noise.
14. I like to multi-task whenever I write.
15. I don’t like writing in a crowded place.

Managing one’s time efficiently - self-regulated learners usually use several strategies so that they fit all their pending tasks to their availability.

1. I create a time table of the writing outputs I need to accomplish.
2. I keep a separate planner for all my writing tasks.
3. I use post-its to keep track of the writing tasks I need to accomplish.
4. I immediately accomplish the writing tasks I need to accomplish during my free time.
5. I finish all my compositions weeks before its deadline.
6. I keep a calendar where all the deadlines of my writing outputs are written.
7. I create a checklist of all the writing tasks I need to finish.
8. I see to it that I finish my writing tasks before their deadline.
9. I keep a notebook where I list a schedule of my daily writing activities.
10. I gradually finish my writing tasks whenever I have nothing to do.
11. I immediately start with the writing task as soon as the teacher gives it.
12. I accomplish all my writing tasks before doing unnecessary things.
13. I set an alarm for every writing task I have scheduled.
14. I allot a specific time for every writing task.
15. I use daily logs to track the writing tasks I have already accomplished.
Evaluating one’s method- refers to comparisons of self-observed performances against some standard, such as one’s prior performance, another person’s performance, or an absolute standard of performance

1. If the drafts of my outputs are not getting good marks, I ask an English teacher for help.
2. I make necessary revisions in my compositions whenever the teacher suggests me to.
3. I edit errors in my compositions before I submit them to the teacher.
4. I like proof-reading activities in class.
5. I enjoy writing workshops because I am given ideas for points for improvements.
6. I take down the comments of everyone who reads my writing outputs.
7. I browse through my drafts to check the progress of my writing.
8. I am open to feedbacks which can help improve my compositions.
9. I cross check if my writing output matches the outline I created.
10. I ask others what changes should be done in my composition for further improvements.
11. I evaluate my written outputs after every session.
12. I take note of the improvements in my written outputs.
13. I benefit from peer-editing activities.
14. I create my own rubric to check my own written output.
15. I make a list of the things I need to improve on in my written outputs.

Attributing causation to results- refers to beliefs about the cause of one's errors or successes

1. I believe that my success or failures lie in my lack of effort to do a writing task.
2. I ask myself what went wrong when I receive a low grade in a certain writing task.
3. I raise certain questions which I believe were the sources of my success.
4. My compositions are excellent because I know I can do well.
5. I attribute my success in my writing task due to my fondness of reading.
6. I credit my teacher for teaching my how to write suitably.
7. I attach my failure to my own personal limitation.
8. I blame someone or something if I did not reach the deadline of my writing task.
9. I hold myself accountable for the success of my writing.
10. My success in the writing task is due to the help of my peers.

Adapting future methods- This phase of self regulation bring about the use of potential techniques that can be used to enhance output.

1. When I receive a low mark on a certain writing activity, I will plan my next activity in a more detailed manner.
2. I read more so that I have a wide range of knowledge for the next writing task.
3. I take note of the comments of the writing instructor and make sure that I apply it in the next writing activity.
4. I read my work carefully and seek where I committed an error.
5. I ask my teacher for possible improvements I can make in my written outputs.
6. I compile my work so that I can see the progress and development of my writing.
7. I ask someone to tutor me for the next writing task.
8. I eliminate distractions that might have interfered with my writing.
9. I experiment with writing strategies to see what suits me best.
10. I make sure that my writing appeals to the one who'll read it.
11. I'll extensively familiarize myself with the next topic I will write about.
12. I'll use thesaurus to enrich my writing and vocabulary in the next writing activity.
13. I will ponder intently for my next writing task.
14. I'll read aloud what I have written so that I can check what sounds good and what doesn’t.
15. I will ensure that the audience of my next writing task will be interested in my composition.