The Effects of Self-Assessment on ESL Students' Academic Achievement

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Abstract
Recent educational trends towards students' accountability as learners, demands the development of lifelong learning abilities by enabling them to self-assess their learning behaviour. In the context of Pakistan, very small number of prior studies has shown focus towards instructional design that engage students towards self-regulated learning, yet these instructional strategies resulted in significant impact on the academic achievement of students. The research methodology was experimental, post-test and control group design, the present study was aimed to assess the effects of self-assessment on intermediate students in English argumentative essay. Through random sampling technique 50 students enrolled in eleventh grade were selected for study, two groups (experimental and control) were formed (25 in each group). Students were asked to complete an Essay to exhibit their academic achievement. Throughout the period of eight weeks of studies, both the control and experimental groups were taught by using traditional instructional techniques; however, an additional intervention strategy of Self-assessment was practiced by the experimental group. After completing eight weeks of study, both the groups were administered post-tests. Analyses of post-tests were made through Independent Sample t-tests. The results obtained on independent sample t-test highlighted the significant differences between experimental and control group, the higher scores by experimental group (M=14.0, SD=2.8) than control group participants (M=10.9, SD=3.5) showed the success of self-assessment to improve academic achievement. The implementation of self-assessment practice is thus recommended to increase achievement of students in their English language subject.

Keywords: Self-assessment, academic achievement, instructional strategy, English as Second Language (ESL)

Introduction

There is increasing demands to improve students' academic achievement in English language subject, however, it is observed that students need to struggle a lot in coping with language skills even after completing secondary education (Fareed et al., 2018; Bhatti et al., 2020; Azatova, 2021). Among other reasons, it is noticed that unsatisfactory performance and lack of interest is also due to in-effective classroom-based instructions (Hinduja et al., 2020). Different research studies investigated that adoption of effective instructional strategies direct students towards self-directed learning that help to maximize students' learning in academic subjects. This study intended to recognize an instructional approach enhancing self-regulation towards learning English language subject. The application of self-assessment has worth-while associations with Self-regulation (SR).

The instructions of self-assessment direct meta-cognitive awareness that is concerned with self-knowledge of learning and serve as an indicator for self-regulation. While taking these assessments, students reflect on their assessment information, seek the guidance from peer and teacher, engage in identifying their learning gap, in this way they make new learning goals, then choose strategies and adjust master their learning goals.

Studies highlighting the significance of reflection in the process of self-regulation, Young (2018) found that reflection deepens learning. Reflection and goals have indirect relationship with students' stress management, self-efficacy, and well-being (Travers et al., 2015). However, it is suggested that to enhance the reflection in second language (L2), the feedback plays pivotal role due to this helps and supports in identification of learning gaps and become basis for self-evaluation and learning (Sarwanti, 2015; Polio & Friedman, 2017; Black & William, 1998; 2018).

Students, as agents of learning, take responsibility to assess their own learning by using variety of self-assessing tools such as portfolio and reflection logs. This active engagement causes positive impact behaviorally, socially, and cognitively in learning second language (L2). In terms of behavior, students exhibit energetic role and persistence in accomplishment of tasks, socially, they interact with peers, critically analyses each other's' work and exchange feedback (Lambert et al., 2017), that arouse curiosity and intrinsic motivation. Research made on self-regulation indicates the role of intrinsic motivation as an essential factor in self-regulation (Cleary et al. 2017). It is not just the responsibility of teachers to provide students with information, but they are also required to develop intrinsic motivation among students, so that they increase their learning values.

Typically, several studies have focused the effectiveness of Self-assessment on university level students and a few studies have explored on higher secondary level students. The misconception that prevails is thinking that higher education leads to higher order thinking. The cognitive development of higher secondary students, especially at eleventh grade level, is an area of concern for the current research study. In this regard, it is imperative to understand cognitive demand of secondary students. Within Piaget's cognitive development model, eleventh graders lie at formal operational stage (Goswami, 2014). Since the abstract and logical thinking are best studied by the students at the formal operational stage, practicing self-regulated strategies were considered best to practice at this developmental stage.

This paper calls teachers and school leaders to inculcate self-regulation among students due to its impact on maximizing students' learning in various subjects (Harris & Brown, 2018). The Gap prevails in understanding how self-assessment works (Andrade, 2019). To fill the gap, this study has planned an experimental study to understand the procedure of self-assessment and how it influences on performance. This study explored whether the self-assessment increases self-regulation and led to higher academic achievement in learning Second language (L2) argumentative essay writing. Therefore, following research question was investigated.

Research Question
Is there difference between the academic achievement scores of students who practiced self-assessment and their counterparts who did not practice self-assessment?

Literature Review
Socio-cultural theory revealed by Vygotsky (1978), cognitive development theory of Piaget (1950), and self-regulated learning theory (Zimmerman & Schunk, 1989) was taken as theoretical support for current study. The following sections present separately the review of the related literature of Self-assessment and its effects on Academic Achievement.

Self-assessment and Academic Achievement
In the former study Piaget (1950)'s cognitive development theory offered a framework for understanding self-assessment within developmental stages (sensorimotor stage, pre-operational stage, concrete operational stage and formal operational stage) of the children. This study's participants lie at the end of formal operational stage. During this stage, adults' beliefs are although vague, but they learn to self-regulate their behaviours (Zimmerman, 1990). Such beliefs make them sure about the nature of task, its importance, use of cognitive approach, and social views of other friends in the classroom. With the passage of time, pupils demonstrate their ability to rethink about their beliefs and articulate them rationally (McClelland & Cameron, 2011). In addition to Piagetian cognitive development, social context plays vital role in learning where classroom setting creates a dynamic environment. Vygotsky (1978) proposed that child learns in two stages: first on social level, and then, on individual level. Three major themes were presented by Vygotsky: Zone of Proximal development (ZPD), more knowledgeable others (MKO) and social interactions. Vygotsky (1978) suggested that guidance and help provided at area of zone of Proximal development would equip the child with skills and support to develop higher mental functions. Teachers are more knowledgeable persons, their modelling, inspiration, high spirit, and competence can boost self-confidence of the learners, addition to this, peers' sense of faithfulness and responsibility to each other keep students motivated and engaged in task.

Dann (2014) suggests that Self-assessment strategy fosters metacognitive regulation. Metacognitive regulation is the process of monitoring one's own learning and providing feedback indicating whether subject matter is understood or not, and at the same time, selecting and practicing learning strategies that were accurate for the place and time (Eker, 2014). Metacognition helps to promote effective learning with their peers or teachers, become capable to perform high order functions. By possessing the abilities of both metacognition and learning to learn, learners organize their own learning in a systematic way (Cheng, 2011).

While, practicing self-assessment, students reflect on assessment information and start self-talks. Tod et al. (2011) wrote that there is significant relationship of positive self-talk with achievement. In addition to this, (Russell & Warner, 2017) found that motivational self-talk increases learners' attention towards challenging tasks. By using self-talks, students get advantage to limit their anxiety for hard tasks. Educators give more importance to the use of self-talk, as a first step of self-regulation and development of metacognition (Clift, 2015).

Instructions play pivotal role in developing meta-cognitive awareness among students and making them conscious of strategies which are related to academic achievement. Studies noted that structured instructions direct and support learners to mastery skills (Ardasheva et al., 2017; Boer et al., 2018). Brown (2015) found that even young students could be taught evaluate their own work, for they cannot develop their ability of reflection without knowledge and

understanding. There is a need of direct instructions as well as frequent reminders for metacognitive awareness (Bansal & Deepika, 2017) and students who applied metacognitive strategies gained higher rank academically (Seker, 2016). Rizwan et al. (2017) investigated nature of errors in Pakistani under-graduate's ESL learners writing skills. Data is collected from 120 English learners from Faisalabad. Students were assigned different tasks such as: narrative and discussion essay type writing, word deletion test in essay writing, and provide missed cohesive words and grammatical items. Data was analyzed by means of scoring rubric used to check accuracy of vocabulary, lexical, grammar and cohesion. Students made 68% errors in coherence, 54% in cohesion and 65% in grammar. Recommendations are made that teachers should use innovative methods to improve students writing skills.

Zyad (2016) emphasized that the need of guided individualized instructions for the development of L2 writing skill in English language. Data was collected from semester-one College Students in Morocco. Four students were selected as sample. Students were given Moodle platform where they were provided book chapters and supplementary material for study. Students posted online written assignments for feedback for twelve weeks. Qualitative case study methodology is used to know the extent to which high performers are benefitted than low performers in such environment. Result shows that low performers could not benefitted from program as compared to high performers due to their social backgrounds. The recommendations were given individualized instructions for L2 development that could help low achievers to motivate and perform well.

Hasanah (2015) explored the effects of self-assessment for the improvement of English writing skills by using quasi-experimental approach. 40 fifth-semester students enrolled in Education Department in Indonesia were chosen by purposive sampling methods. Students were divided in to two groups experimental and control group. Students were taught self-assessment techniques in experimental group, while control group was treated conventionally. Both groups were given writing test questionnaire as pre-test and Post-test. T-test was used for comparison of results; it shows significant positive impact of self-assessment in writing achievement.

Application of SRL is important to improve academic success. It is revealed from numerous interventions studies, that self-regulated learning enhances students' performance. The classroom interventions emphasized on knowledge of self, promoted self-confidence towards their learning positively (Paris & Newman, 1990). With the self-conscious, right use of suitable strategies with suitable time and place, was precursor for academic performance (Eker, 2014). Based on above literature, following hypothesis is constructed:

H1: There is no significant difference between the pre-test and post-test scores of the students in their self-assessment scores

Methods
Research design
This is a quantitative study which used independent sample t-test to know the differences between experimental and control group.
Sampling
The participants were eleventh graders chosen with the random sampling technique from four classrooms. Two groups were formed control group (*n=25*) and experimental group (*n=25*). Gpower analysis endored the adequacy of sample size (N=30), with significance level *a=.05,* effect size, *d=0.9* (Cohen, 1988) and power, *P=0.9*. Two English language teachers of the school participated in the study with their consent. None of the participants reported absent during the experimental period. Instructional strategies regarding argumentative Essay writing suggested by Smith (2018) were employed in both groups.

Procedure
An Argumentative essay in English subject was selected unit of study. The unit is required to answer the questions (1) what is an argumentative Essay? (2) How is an argumentative essay written? The aspects of unit included reasoning, generating argument and logic, while the organization of the unit included Introduction, Main body paragraphs and Conclusion.

Students are provided instructions as suggested by Smith (2018) for eight weeks. Both the control and experimental group received traditional instructions; however, an experimental group was provided additional instructions to practice Self-assessment strategy. The Self-assessment strategy was practiced with the follow-up of worksheets consisted of three parts. In part I, students self-assessed their work and generate self-driven feedback, then, in part II they attempted peer review under supervision of teachers. Later on in part III, students engaged in peer conferencing, this helped them in self-judgement and development of two additional learning (mastery) goals. Teacher collected worksheets provided students diagnostic and descriptive feedback. Afterward, these worksheets were returned to

students. Teachers regularly reiterated target goals by practicing argumentative essay writing. Figure 1 illustrates the process how students went through stages while practicing Self-assessment in experimental group.

Figure 1.
The writing process represented in experimental group
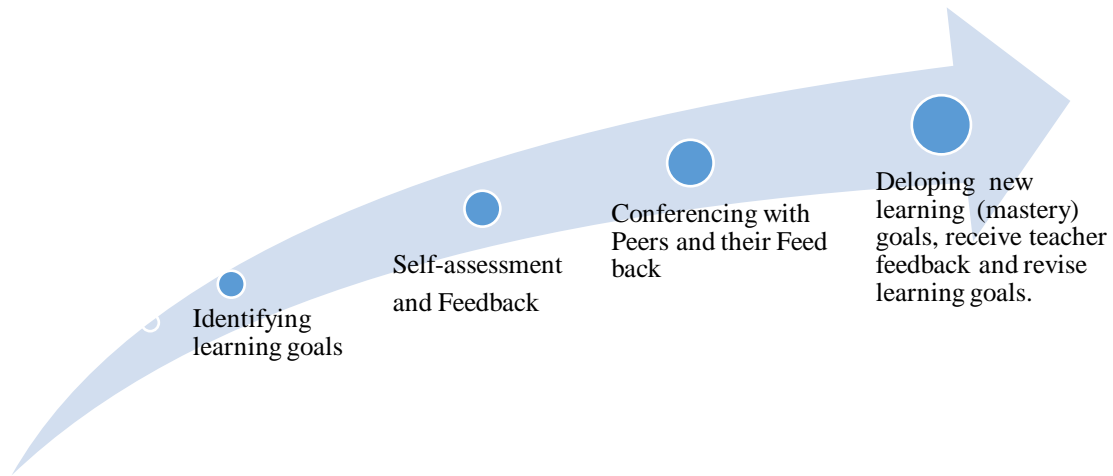
Statistical Analysis

Data was entered in SPSS software *version* 22 to be analysed through independent sample t-test, the significance level p< .05 was used to accept *hypothesis*/ reject *null hypothesis*. Before hypothesis testing, pre-tests were analysed. Pre-test results of academic achievement indicated insignificant difference between groups as p=0.77 in Academic achievement

Results

To address the research question "Is there significant difference between the post-test scores of the students who practiced self-assessment and their counterparts who did not practice self-assessment", an independent sample t-test was conducted on the Post-test scores taken from students' attempt on Argumentative Essay Writing. The scores from students' midterm exams (pretest) and post-tests are mentioned in the form of descriptive statistic (mean, standard deviation and median) in the table below.

Table 1.
Mean, Standard deviation, Median and Range

Groups	Pre-tests					Post-tests			
	M	*SD*	*MDN*	*Range*		*M*	*SD*	*MDN*	*Range*
Control (n=25)	8.63	2.26	8.5	8.0		10.9	3.5	11.0	12.0
Experimental group (n=25)	8.46	2.19	8.0	8.0		14.0	2.8	14.0	10.0

Note: n=number of participants. Total marks on essay=24

Results from post-tests analysis showed significant difference (p=0.00), post-test academic achievement score (*M*=14.0, *SD*=2.8) of the participants in experimental group was higher than the participants of control group (*M*=10.9, *SD*=3.5).

Discussion

This study positively supported an influence of self-assessment practice on ESL students' academic writing improvements. While participating in intervention, students clarified learning goals later they engaged in self and peer assessment. Results indicated that as the eleventh graders practiced Self-assessment, they were capable to examine their own strength and weaknesses and set up their improvement goals. These results are consistent with the previous studies done on elementary level, secondary level and, higher secondary level (Clift, 2015; Teng, & Zhang, 2017; Hinduja et al., 2020). These results provide additional support to the assertion that students can self-assess accurately (Paris & Newman, 1990) and calibrate their learning successfully (Lee & Mak, 2014).

Within intervention group participants were coached to design the learning goal, result showed a positive impact on learning, result of this study is parallel to previous findings that goal setting leads to increase academic achievement. Travers et al. (2015) found goal setting improved academic achievement of university students, while Kitsantas et al. (2017) found that the elementary students who practiced self-regulation reported higher achievement. Cleary et al. (2017) found self-regulation helped increase academic achievement of students in mathematic subject. This study expands the findings of the study (Cleary et al., 2017) to ESL learners and provide empirical evidence suggested by the study (Eker, 2014) that students are able to regulate metacognition, monitor their academic progress, select and apply learning strategies that are timely effective.

This study supports the evidence that teaching self-assessment explicitly in this study sustains Paris and Paris (2001) academic achievement theory and Vygotskian socio-cultural theory that how pupils can be helped by other people to learn tricks for regulating ones' learning and behavior. Canbay (2020) asserted that by introducing interventions students can be able to evaluate their skills and learn more correctly. These results indicate that by practicing self-assessment activities, secondary school students can reflect their leaning and learning needs correctly thus increase academic achievement.

Li et al. (2021) reported that the meta-analysis explores the association among self-assessment (SA) and language performance. Furthermore, six moderators were shown to have substantial moderating impacts, containing self-assessment (SA) criteria type, existence and practice of SA criteria, SA tools, teaching, total number of objects in the SA tool, and consistency of SA tools. In addition, only female students' participation and population validity is taken limitation of the study. Although, it was assumed that the sample population was representative of all eleventh graders, English as Second Language (ESL) learners in the Karachi, yet it may or may not the same case with all, always. To counteract this external validity's threat and establish generalizability, further studies are needed to be conducted by future researchers.

Conclusion

Current research entirely supports self-assessment practice by suggesting an instructional strategy that can be used by teachers to modify classroom practices and promote self-regulated learning among students. This study was evidently revealed that the participants who practiced self-assessment achieve higher academically. Self-assessment strategy maximizes self-regulated learning process in a systematic and logical manner for students at formal operational stage of cognitive development therefore should be instructional part of every higher secondary level educational institution. In the light of results, Educators/Teachers are recommended to adapt Self-assessment approach into their classroom routines, by providing ESL students context that increase self-regulated behaviours which impact positively on their academic achievement. We also recommend students to reflect on their own learning processes by practicing self-assessment, peer-assessment and developing new learning goals, to gain deeper understanding and mastery over language skills. It is recommended for future researchers to examine the effects of self-assessment on motivational aspects of learning such as self-efficacy, intrinsic goal orientation and self-regulated behaviors through valid and reliable tools for different academic levels of students.

References

Andrade, H. L. (2019). A critical review of research on student self-assessment. *Frontiers in Education. 4*, 87.

Ardasheva, Y., Wang, Z., Adesope, O. O., & Valentine, J. C. (2017). Exploring effectiveness and moderators of language learning strategy instruction on second language and self-regulated learning outcomes. *Review of Educational Research*, *87*(3), 544-582.

Azatova, S. (2021). I control my own English learning: developing self-regulation in elementary ell using self-assessment and explicit strategy instruction. *Teflin Journal, 32*(2), 183-213.

Bansal, P., & Deepika, M. (2017). The effectiveness of English remedial program: A case study. *Educational Beacon*, 30.

Bhatti, A. M., Hussain, Z., Azim, M. U., & Gulfam, G. Q. (2020). Perceptions of ESL learners and teachers on writing difficulties in English language learning in Lahore. *International Bulletin of Linguistics and Literature (IBLL)*, *3*(3), 11-24.

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: principles, policy & practice*, *5*(1), 7-74.

Black, P., & Wiliam, D. (2018). Classroom assessment and pedagogy. *Assessment in Education: Principles, Policy & Practice*, 1-25.

Boer, H., Donker, A. S., Kostons, D. D., & van der Werf, G. P. (2018). Long-term effects of metacognitive strategy instruction on student academic achievement: A meta-analysis. *Educational Research Review*. 24, 98-115.

Brown, G. (2015). Self and peer assessment. In *Assessment & grading seminar series*. *European Journal of Psychology of Education*, *32*(1), 133-156.

Canbay, F. (2020). The Relationship between self-regulation and use of language learning strategies in secondary school students. *PASAA: Journal of Language Teaching and Learning in Thailand, 60*, 1-22.

Cheng, C. K. E. (2011). The role of self-regulated learning in enhancing learning achievement. *The International of Research Review 6*(1), 1-16.

Cleary, T. J., Velardi, B., & Schnaidman, B. (2017). Effects of the self-regulation empowerment program (SREP) on middle school students' strategic skills, self-efficacy, and mathematics achievement. *Journal of school psychology*, *64*, 28-42.

Clift, L. D. (2015). *The effects of student self-assessment with goal setting on fourth grade mathematics students: Creating self-regulating agents of learning*. Liberty University.

Cohen, J. (1988). The analysis of variance and covariance. *Statistical power analysis for the behavioural sciences.*

Dann, R. (2014). Assessment as learning: blurring the boundaries of assessment and learning for theory, policy and practice. *Assessment in Education: Principles, Policy & Practice*, *21*(2), 149-166.

Eker, C. (2014). The effect of teaching practice conducted by using metacognition strategies on students' reading comprehension skills. *International Online Journal of Educational Sciences, 6*(2), 269-280.

Fareed, M., Jawed, S., & Awan, S. (2018). Teaching English language at SSC level in private non-elite schools in Pakistan: Practices and problems. *Journal of Education and Educational Development*, *5*(1), 80-95.

Goswami, U. (2014). *Cognition in children*. Psychology Press.

Harris, L. R., & Brown, G. T. (2018). *Using self-assessment to improve student learning*. Routledge.

Hasanah, U. (2015). The use of self-assessment in improving students' ability in writing English skill. *Ethical Lingua: Journal of Language Teaching and Literature*, *2*(1), 16-26.

Hinduja, P., Thomas, M., & Siddiqui, S. (2020). The Effects of Assessment as Learning (AaL) on ESL students' academic performance and motivation in the light of self-Regulated Learning (SRL) Theory. *FWU Journal of Social Sciences*, *14*(4), 26-42.

Kitsantas, A., Steen, S., & Huie, F. (2017). The role of self-regulated strategies and goal orientation in predicting achievement of elementary school children. *International Electronic Journal of Elementary Education*, *2*(1), 65-81.

Lambert, C., Philp, J., & Nakamura, S. (2017). Learner-generated content and engagement in second language task achievement. *Language Teaching Research*, *21*(6), 665-680.

Lee, I., & Mak, P. (2014). Assessment as learning in the language classroom. *Assessment as learning. Hong Kong: Education Bureau*, *3*, 66-78.

Li, M., & Zhang, X. (2021). A meta-analysis of self-assessment and language performance in language testing and assessment. *Language Testing*, *38*(2), 189-218.

McClelland, M. M., & Cameron, C. E. (2011). Self-regulation and academic achievement in elementary school children. *New Directions for Child and Adolescent Development*, *2011*(133), 29-44.

Paris, S. G., & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. Educational Psychologist, 36(2), 89-101.

Paris, S.G., & Newman, R.S. (1990). Developmental aspects of self-regulated learning. *Educational Psychologist, 25*(1), 87-102.

Piaget, J. (1950). *The psychology of intelligence*. Harcourt-Brace.

Polio, C., & Friedman, D. A. (2017). *Understanding, evaluating, and conducting second language writing research*. Routledge.

Rizwan, M., Akhtar, S., & Sohail, W. (2017). The frequency of local and global errors in the writing skill of undergraduate ESL learners of Pakistan. *Asian Journal of Social Sciences & Humanities.6*, 1.

Russell, D., & Warner, R. (2017). Motivational intermediaries of self-regulation among university students. *Journal of Applied Research in Higher Education*, *9*(3), 448-464.

Sarwanti, S. (2015). Authentic assesment in writing. *transformatika: Jurnal Bahasa, Sastra, dan Pengajarannya*, *11*(2), 20-40.

Seker, M. (2016). The use of self-regulation strategies by foreign language learners and its role in language achievement. *Language Teaching Research*, *20*(5), 500-618.

Smith, L. (2018). *10 steps to write an outstanding argumentative essay*. http://works.bepress.com/lidia-smith/2/

Teng, L. S., & Zhang, L. J. (2017). Effects of motivational regulation strategies on writing achievement: A mediation model of self-regulated learning of writing in English as a second/foreign language. *Metacognition and Learning*, 1-28.

Tod, D., Hardy, J., & Oliver, E. (2011). Effects of self-talk: A systematic review. *Journal of Sport and Exercise Psychology*, *33*(5), 666-687.

Travers, C. J., Morisano, D., & Locke, E. A. (2015). Self-reflection, growth goals, and academic outcomes: A qualitative study. *British Journal of Educational Psychology*, *85*(2), 224-241.

Vygotsky, L. S. (1978). *Mind in society*. Cambridge University Press.

Young, M. R. (2018). Reflection fosters deep learning: The 'reflection page & relevant to you' intervention. *Journal of Instructional Pedagogies*, *20*.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview.

Zimmerman, B. J., & Schunk, D. H. (1989). *Self-regulated learning and academic achievement: Theory, research, and practice*. Springer-Verlag.

Zyad, H. (2016). L2 writing development: The case of two high-achieving and two struggling college-level students. *International Journal for 21st Century Education*, *3*(1), 25-36.