

Augmenting EFL students' academic writing motivation using Socratic Method of learning

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Abstract

This study aimed at exploring effects of using Socratic Method of learning on students' motivation towards academic writing. A quasi-experimental design that employed a time-series design with single-group participants was used. A total of 24 EFL undergraduate students who took an advanced writing skills course were selected using a comprehensive sampling method. A questionnaire, focus group discussion, and student-reflective journals were used to gather data. While the quantitative data were analyzed using paired-samples t-test and descriptive statistics, the qualitative data were analyzed thematically through narration. The questionnaire data were analyzed using paired samples t-test to compare the students' motivation before and after the intervention. The students' level of motivation was measured using four criteria: self-efficacy, goal orientation, belief about writing, and affect about writing. The findings revealed that using Socratic Method of learning increased students' motivation towards academic writing. The mean score results showed that self-efficacy of writing (Pretest Mean, 1.6476; Post-test Mean, 4.4000), goal orientation (Pretest Mean, 1.5619; Post-test Mean, 4.4095), beliefs about writing (Pretest Mean, 1.6571; Post-test Mean, 4.3524), affect about writing (Pretest Mean, 1.5357; Post-test Mean, 4.4286). Therefore, it increased students' motivation towards academic writing which includes self-efficacy, goal orientation, belief and affect about writing. Thus, this study recommends researchers, teachers, and students pay due attention to Socratic Method of learning.

Keywords: Socratic dialogue; Socratic Method of learning; Motivation; Academic writing; Ethiopia

Introduction

Socratic method of learning is a form of active learning method that starts learning by posing questions, problems, or situations rather than presenting facts directly to students. Socratic questioning is one of the most powerful methods of learning (Sahamid, 2016; Agbowuro et al., 2019). It used small scale investigations, projects, and research. In the process of Socratic method of learning, students identify and research issues to develop their knowledge, and the teacher facilitates the process of learning. The Socratic method of learning was developed during the discovery learning movement in the 1960s as a response to a teacher-centred form of instruction (Barrow, 2006, and Grondin, 2018).

The origin of the Socratic method of learning is Socrates questioning. It includes a friendly conversation with a partner in which one would ask a question, the other would answer, the first would question the other's reply, and so on. Socrates felt this process of asking, answering, and asking again would eventually allow students to distil their knowledge to a point of greater understanding (Wabisabi Learning, 2018). From the root of Socratic questioning, Dewey also came in support of the Socratic method of learning in the early 20th century. Before Socrates, most educators believed that people had learned best through direct instruction and by connecting new information to what they already know (NRC, 2000, and Kusmaryani, 2020). Socrates challenged the sole use of teacher-centred learning by emphasizing the importance of experiential learning using the scientific inquisition method to best prepare students for the future.

The philosophy of Socratic Method of learning is part of constructivism developed by Bruner, Dewey, Piaget, and Vygotsky among others. Constructivism appeared early in the 20th century and emphasizes learning with the roles of culture, interaction, cognitive development, experience, and meaning-making. Constructivism encourages students to use their prior knowledge and experience to gain new knowledge and develop understanding (Muhaimed, 2013). Socratic Method of learning, which fosters reasoning and problem-solving skills is embedded in the theory of constructivism (Hardin, 2009). The constructivist theory supports Socratic Method of learning because students are encouraged to be actively and collaboratively involved in their learning by connecting prior experiences with new information (Ozmon and Craver, 2008, and Aray, 2020). The learning process and knowledge construction of Socratic Method of learning is a result of individuals' interaction in social settings. This method encourages student curiosity of developing questions, researching, and finding out answers to questions.

The Socratic Method involves a shared dialogue between a teacher and students. The teacher leads by posing thought-provoking questions. Students actively engage by asking questions of their own. Socrates, in his "Socratic dialog method", encouraged learners to query opinions and distinguish between those ideas which are reasonable and those which are not (Orhan (2022)). The pedagogical thought of Socratic method of learning is primarily investigated in social science classrooms. For instance, Bryant (2006) found that students' academic achievement and motivation were higher when they learned with Socratic method of learning. The way of instruction used in Socratic method of learning also promotes communication, collaboration, creativity, learner autonomy, and the use of authentic activities that have personal importance and

relevance to students (Barron & Darling-Hammond, 2010). Having interesting questions that involve students seeking information from various sources, collaborating with colleagues, organize and integrate information with their interests increases motivation and engagement; the Socratic method of learning (Socratic dialogue) increased students motivation in the 21st century (Wright, 2014, and Suhadi, Zaid, Abdullah, and Mohamed, 2015). In line with this view, Wright (2014) indicated that the Socratic method of learning increased students' motivation and engagement, and enabled them to be autonomous learners.

However, Clark et al (2013) also found that there was no indication that Socratic Method of learning had any significant effects on the treatment group in terms of motivation. This finding provided evidence that using the method in language classrooms was not effective in increasing student motivation. The treatment group's reading materials were less monitored because, they were given autonomy in their search for resources. Finally, in contrast to the present study, Firssova et al (2014) also investigated the effects of using Socratic Method of learning on students' motivation and revealed that the students had a general decrease in interest, rather than to boost of motivation. Roberson (2013) stated that students often lack motivation towards learning, and this interferes with their academic achievement. However, Socratic dialogue is seen to provide motivation towards learning in students where students pick out topics that are interesting to them, share ideas with friends, and finally, write essays on their choice. Such a method is intended to increase students' motivation (Edward, 1983).

Therefore, it can be summed up that even though most researchers revealed that Socratic Method of learning developed students' motivation towards writing, some other researchers have reservations about its effectiveness. However, since the effectiveness of the method in the Ethiopian context has not been studied yet, the present study was designed to investigate its effectiveness in the local context. Accordingly, this study was designed to examine the effects of Socratic method of learning on EFL students' motivation towards academic writing in an Ethiopian EFL classroom context.

Methods

This study was aimed at examining the effects of using Socratic method of learning on students' motivation towards academic writing. The research design of the study was quasi-experimental that employed a time series design with single-group

participants. Single group quasi-experimental design helps examine an effect in a group of participants alleviates data contamination between different groups and controls other extraneous variables (Matowe et al., 2003). In this study; therefore, single group quasi-experimental design was used to investigate the effects of using Socratic method of learning on students' motivation towards academic writing performance.

Participants

In this study, a total of 24 EFL second-year undergraduate students who were enrolled in "Advanced Writing Skills" course in the Department of English Language and Literature, Injibara University, were selected using a comprehensive sampling method.

Data Gathering Instruments

In this study, questionnaires, focus group discussion, and student-reflective journals were used to collect data on students' motivation towards academic writing.

Students' Questionnaire

The questionnaire was used to collect data on students' motivation toward academic writing. It was adapted from MacArthur, Philippakos, and Graham (2016). The questionnaire incorporated a total of twenty-four items related to self-efficacy, ten; achievement goals, five; beliefs about writing, five, and affect about writing, four items because as MacArthur, Philippakos, and Graham (2016) stated, these are the main factors of motivation. While the questionnaire items were close-ended, they were used to gather quantitative data on students' academic motivation. The items were five-point Likert-type questions ranging from strongly agree to strongly disagree. The questionnaire was distributed both before and after the intervention. Whereas the pre-intervention questionnaire was used to understand students' existing motivation towards academic writing before the intervention, the post-intervention questionnaire was used to see if there were changes in students' motivation towards writing after the intervention.

The validity of the questionnaire was ascertained by two PhD holder English language teachers. Besides, the reliability coefficient of the questionnaire items was calculated with Cronbach Alpha data analysis method. McMillan and Schumacher (1997) stated that Cronbach Alpha is the most appropriate method to check the reliability of instruments, like a five-point Likert-type question. Accordingly, the reliability coefficient of the questionnaire was 0.92 which indicates that it was reliable.

Focus Group Discussion

The focus group discussion was needed to gather qualitative data from the students' voices about the effects of using Socratic Method of learning on their academic performance. It was used to support the data gained from the questionnaire regarding students' motivation towards writing. The validity of the focus group discussion items was ascertained by two PhD holder English language teachers. The focus group discussion was conducted with ten randomly selected students. The students were asked to forward their views on the relevance of Socratic Method of learning to enhance their motivation towards academic writing. Hence, the focus group discussion was focused on the effectiveness of using Socratic Method of learning on students' motivation towards academic writing.

Student-Reflective Journal

The student-reflective journal, in this study, was used to collect qualitative data about students' feelings, thoughts, and experiences on Socratic Method of learning used in writing instruction. This tool was used to triangulate the data gained from questionnaire and focus group discussion regarding students' motivation towards academic writing. Thus, a checklist was designed to guide students' reflection about the effectiveness of daily lessons, and ways which should be improved. The student-reflective journal has focused on the effectiveness of using Socratic method of learning on students' motivation towards academic writing. The validity of the student-reflective journal items was ascertained by two PhD holder English language teachers.

Data Collection Procedure

Before the data collection process, the data gathering instruments including questionnaire, student-reflective journal items, and focus group discussion items were prepared. Besides, the teaching material was developed based on the Socratic method of learning. Then, all the data gathering instruments and the teaching material were reviewed by two PhD holder English language teachers. The necessary modifications, like merging and deleting some redundant items, were made to the data gathering instruments and the teaching material based on their feedback. As it is stated above, the teaching material used to teach argumentative essay writing skills was prepared using the literature following the Socratic method of learning.

The teaching material was developed in a way that enables students to make observations; pose questions; examine sources; gather, analyse, interpret, and

synthesize data; propose answers, explain and predict; communicate findings through discussion and reflection; apply their findings to the real situation, and follow up new questions that arise in the process because these are the focus of Socratic method of learning. Then, the participants were given a pre-intervention questionnaire to determine their existing motivation towards academic writing. Next, the intervention was given by the teacher-researcher as presented below. During the intervention, the student-reflection journal was collected from the students. After the completion of the teaching-learning process, the questionnaire was administered to determine whether there were changes in the students' motivation towards academic writing. Finally, the focus group discussion was also conducted with the selected participants to gather data on the students' motivation. By the completion of the data gathering process, the data analysis was made using both quantitative and qualitative methods.

The Intervention

The intervention was a Socratic method of academic writing instruction delivered for two months using the aforementioned teaching material. In the teaching-learning process, the students were engaged in writing tasks including discovering their writing topics, discovering supportive information, discovering arrangements of ideas, discovering stylistic choice to write introduction and conclusion, using style to promote unity, specificity and coherence, and producing the final draft of their essays. In other terms, the students discovered topics, explored data on their topics, elaborated their writing, and extended their learning into the real situation with integrated assessment and reflection.

The students performed their writing tasks individually, in pairs, small groups and whole class discussions. They mostly use the Think-Pair-Share technique to think individually, work in pairs, and discuss in groups. Accordingly, the students practiced argumentative essay writing tasks using the Socratic method of learning. In the teaching-learning process, the teacher was facilitating the learning process while the students do their writing tasks. In other words, the teacher connected the topic to the learner, discussed and reflected on actions, and scaffold students to probe questions, explore information, discuss ideas, discover solutions, and apply their findings in a real situation.

Data Analysis Methods

The quantitative data gained through a questionnaire were analyzed with paired-samples t-test, and descriptive statistics using the Statistical Package for Social Sciences (SPSS) version 26. The paired samples t-test was used to compare the

students' motivation before and after the intervention using the Socratic method of learning in their advanced writing skills course. The students' level of motivation was measured using four criteria: self-efficacy, goal orientation, belief about writing, and affect about writing because as MacArthur, Philippakos and Graham (2016) stated, these are the main factors of motivation. On the other hand, the qualitative data gained through student-reflective journal and focus group discussion were analyzed thematically through narration. In other terms, the focus group discussion transcripts and the students' reflective journal were closely examined to identify common themes or topics, ideas, and patterns of meaning. Accordingly, the collected data on the students' motivation towards academic writing were examined and identified into common themes.

Results

This sub-section presents the questionnaire results gained through paired samples statistics. The paired samples statistics shows that the *Mean* scores of the post-tests were higher than the Mean scores of the pre-tests in each pair (Table-1). Particularly, the students' self-efficacy of writing (Pre-test Mean, 1.6476; Post-test Mean, 4.4000) increased when they used Socratic Method of learning. Therefore, the students had better self-efficacy when they used Socratic Method of learning. Likewise, the students' goal orientation of writing also increased when they learned writing skills through Socratic Method of learning. The students' goal orientation pre-test Mean was 1.5619 while the post-test was 4.4095. This shows that the students' goal orientation increased after they had used Socratic Method of learning.

Table-1: Comparison of students' motivation: Before and after the intervention

Pairs Tests	Items		Std. Deviation	Std. Error
	Mean	N		
Pair 1	Self-efficacy of writing Pre-intervention	1.6476	21	.34730
	Post-intervention	4.4000	21	.28284
Pair 2	Goal orientation of writing Pre-intervention	1.5619	21	.32631
	Post-intervention	4.4095	21	.34337
Pair 3	Belief about writing Pre-intervention	1.6571	21	.39569
	Post-intervention	4.3524	21	.36826
Pair 4	Affect about writing Pre-intervention	1.5357	21	.38960
	Post-intervention	4.4286	21	.40422

In addition, the students had positive beliefs about writing after they used Socratic method of learning. The table shows that the pre-test Mean was 1.6571 while the post-test Mean was 4.3524. Finally, the students' affect about writing was also higher in the post-test compared with the pre-test (pretest Mean, 1.5357; post-test Mean, 4.4286). The result shows that the students' affect about writing increased when they used the Socratic method of learning. Similarly, the Standard Deviations of the pre-intervention and post-intervention results of each pair have no significant differences. This implies that the students' motivation increased after the intervention. Thus, it can be understood that using Socratic method of learning in writing classes increased students' self-efficacy, goal orientation, and belief and affect about writing which are the core elements of motivation.

Table-2: Paired samples t-test result of students' motivation before and after the intervention

<i>Pairs</i>	<i>Items</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Mean</i>	<i>Error T</i>	<i>Df</i>	<i>Sig. (2-tailed)</i>
Pair 1	Self-efficacy Pre-intervention and Post-intervention	2.75238	.59129	.12903	-21.331	20	.000
Pair 2	Goal orientation Pre- intervention and post- intervention	2.84762	.64469	.14068	-20.242	20	.000
Pair 3	Belief about writing Pre – intervention and post- intervention	2.69524	.67118	.14646	-18.402	20	.000
Pair 4	Affect about writing Pre – intervention and post- intervention	2.89286	.70963	.15485	-18.681	20	.000

The paired samples test table, also shows that the students' motivation increased after using the Socratic method of learning (Table 2). Specifically, the null hypothesis of equal self-efficacy means was rejected, $t(20) = -21.331$, $p < 0.05$. Similarly, the null hypothesis of equal goal orientation means was rejected, $t(20) = -20.242$, $p < 0.05$. Likewise, the null hypothesis of equal belief about writing means was rejected, $t(20) = -18.402$, $p < 0.05$. Lastly, the null hypothesis of equal affect about writing means was rejected, $t(20) = -18.681$, $p < 0.05$. Thus, the post-intervention means of each motivation element were statistically significantly higher than each pre-intervention mean. Therefore, it can be concluded that the students' self-efficacy, goal orientation, belief and affect about writing increased through the Socratic method of writing instruction in their advanced writing classes.

In general, the paired samples t-test results exhibited that using the Socratic method of learning in writing classes increased students' self-efficacy, goal orientation, belief and affect about writing which are the core elements of motivation.

In the focus group discussion, the students replied that using the Socratic method of learning increased their motivation related to their willingness and preference towards writing. According to the students' report, they were interested in doing the writing tasks while they were using the Socratic method of learning. As their expression showed, the way of learning used in Socratic method of writing instruction was interesting to the students since it allowed them to use their writing topics rather than receiving topics from the teacher unwillingly. They were also interested in searching for information from various sources on their topics, to evaluate and use of the collected data, and to produce essays with adequate evidence.

They stated that the discussions they made with their friends and experts on their essays were interesting to them. The feedback from their discussion was important to improve their essay. In addition, they were also interested in presenting their written essays and reflecting on the process of producing essays. In general, the students' focus group discussion result indicated that the students' motivation improved after they used the Socratic method of learning in their advanced writing skills course.

The data gained through students' reflective journals indicated that the students' motivation increased when they used the Socratic method of learning. They reported that the techniques used were interesting to work on the writing tasks. They also stated that writing is important to explore and express ideas.

One of the students reported:

Before this time, I can't wrote good essays, but when I learn advanced writing in this way, I can write good essays that are convincing and complete in their contents. Last year, my aim of writing was just to submit the assignment to the teacher and to get good scores, but now I try to develop my writing ability based on the lessons.

Another student also stated that her motivation increased after the Socratic method of learning was used in the writing classes. Her reflective journal account can be read as follows:

In my previous courses, I had problems related with lack of understanding on how to begin writing and how to find a topic due to lack of ideas. However, in this course, I can get ideas myself using the techniques given in the hand out. In addition, I had fear of mistakes and teachers' comments on grammatical errors and ideas. But now, the teacher advised us to be confident in our writing, and revise the essays for the second time. As a result, I become motivated to write my essays without fear.

The students also mentioned that the teaching material was interesting because the essay writing techniques, writing tasks, sample essays, and other related contents

presented in the material were clear to read and understand. The students feel as if they could accomplish the writing task given in the learning process. As they mentioned, the writing skills that they have developed through the Socratic method of writing instruction were helpful to their future career related to producing real-life texts. They also noted that writing is an interesting job though the process of writing is not simple.

Therefore, the students' reflective journal accounts imply that after the students used Socratic method of learning in their writing classes, their capability to perform the writing tasks improved, and their motivation towards academic writing also increased. In the learning process, the students were allowed to discover their writing topics based on their interest, gather data through interview, observation, and read from both hard and soft copies, evaluate and select the relevant collected data, write various drafts, gain feedback, work individually and in small groups, and reflect on their ways of learning writing. These steps motivated the students because the students were actively engaged in performing the writing tasks based on their willingness. In sum, it can be deduced that the students believed that using Socratic method of writing instruction has increased their motivation towards academic writing.

All in all, the questionnaire, focus group discussion and student-reflective journal results on students' motivation towards writing showed that using Socratic method of learning in writing classes increased students' self-efficacy, goal orientation, belief about writing, and affect about writing which are the core elements of motivation. It is also identified that the students believed that using Socratic method of learning in advanced writing skills course increased their motivation towards academic writing.

Discussions

The results of the study showed that Socratic method of learning had positive effects on students' motivation towards academic writing. The present study showed that using the Socratic method of learning in writing classes increased students' motivation that incorporates self-efficacy, goal orientation, belief about writing, and affect about writing. This research finding is consistent with most of the earlier research works. For example, Nurtalina (2013) showed that the students were active and motivated in the learning process when they were taught narrative writing skills using Socratic method of learning. Accordingly, the use of Socratic method of learning increased the students' interest and enabled them to express their ideas in narrative writing.

Similarly, Zeki et al (2013) found that Socratic method of learning made positive contributions to the motivations of students in the sub-dimensions of existing goal orientation. Students' goal orientation developed after the application of Socratic method of learning. It supports earlier research findings that concluded Socratic method of learning activities promote students' motivation. The Socratic method of learning raised students' motivation as the tasks gave students freedom in making their choice, provided them with opportunities to carry out self-regulation and to take part in projects they are interested in.

Likewise, Ulfah (2012) also found that the students had a good response in learning writing skills using Socratic method of learning. They paid attention when the teacher explained the material and while they were discussing their work in the classroom. In addition, the students tried to do the exercise seriously. They also did not feel ashamed of asking about their difficulties and showing their work to their teacher and friends. The students felt happier, confident, and creative because they had high motivation than before. In the same vein, McElvain and Smith (2016) reported that there was a positive effect on students' bilingual ability, higher motivation to learn, and increased self-efficacy in the treatment group of students who used Socratic method of learning in a bilingual context.

Wadi (2018) also noted that the techniques used in Socratic method of learning had positive impacts on increasing EFL/ESL student-teachers' motivations toward learning an English content-based course which indicates the effectiveness of the learning method in motivating students to study English language courses. The student-teachers became critical of the knowledge they were exposed to in the course.

The current research findings are also in line with Gasmi and Nadabi (2023) that mentioned the Socratic method of learning enhanced learners' motivation and engagement in the learning process. Barry et al., (2023) also discovered that the Socratic dialogue method of learning was a promising educational intervention because the students were motivated to participate, and their motivation was significantly increased during the lessons. Besides, Ibid reported that the teachers considered Socratic dialogue as feasible and well-tailored to their students. Besides, Hardini (2020) also found that the Socratic method increased students' confidence in their learning, and they enjoyed the activities used in class, for they had discussion, experience sharing, and cooperation. Similarly, Roberson (2013) uncovered that the application of Socratic method provided student motivation towards their learning.

Nevertheless, though the present study revealed that the Socratic method of learning increased students' motivation towards writing, some previous researchers found that using Socratic method of learning was not effective to increase students' motivation towards writing. To exemplify, Firssova et al (2014) revealed that the students had a general decrease of interest, rather than boosting of motivation while using the method. Similarly, Clark et al (2013) revealed that there was no indication that Socratic method of learning had any significant effects on the treatment group in terms of motivation.

In the same fashion, Caputo (2014) also revealed that the method was challenging for learners who may, for various reasons, react negatively to some key aspects of the approach, such as the use of process-focused instruction, the requirement for learner independence, and the increased linguistic load put on students, which is not in congruence with the findings of the present study. Finally, Caputo (2014) showed that learners felt uncomfortable with new or unfamiliar pedagogic approaches when unprepared: consequentially, this emotional discomfort impeded their learning of the target language.

Conclusions and Implications

The findings of the study revealed that the use of Socratic method of learning in academic writing instruction increased students' motivation that includes self-efficacy, goal orientation, belief and affect about writing. The students believed that writing is not a simple task, in general, learning writing skills through Socratic method of learning is interesting since it enabled them to learn writing by doing rather than memorizing facts. All in all, the findings of the study disclosed that using the Socratic method of learning in writing classes had significant positive effects on EFL students' motivation towards academic writing. The method improved the students' academic writing skills and motivation. Therefore, Socratic method of learning is suggested as a means to increase students' motivation because the method incorporates activity-oriented learning, logical arguments, and collaboration. This is to imply the need to promote Socratic method of learning which is based on a discovery approach that involves students in seeking, collecting, analysing, synthesizing, and evaluating information based on students' interest. It is because using this method in writing classes made students active, problem solver, autonomous, and lifelong learners.

Accordingly, English language teachers should use Socratic method of learning in their classrooms in order to increase their students' motivation towards academic writing. Similarly, teaching material developers need to consider the Socratic method

of learning principles in developing language teaching materials so that students increase their motivation towards writing. Students should also use the techniques of Socratic method of learning to increase their motivation towards writing. Finally, the number of participants and the time given to the intervention were relatively small. However, it does not mean that the findings of the study are not representative since the selected participants have similarities with other students. In addition, it does not mean that the intervention is completely inadequate since the students practiced the Socratic method of learning repeatedly. It is to mean that the findings of the study would have been more representative and convincing if a greater number of participants had been included, and more time had been used to the intervention in the study. As a result, such exploration would have contributed to the current study and is certainly an area ripe for future research. Furthermore, future studies should also be conducted on the effects of using Socratic method of learning on students' engagement in English language learning.

Author's contributions:

The author of this research conceptualized the research idea, conducted the study, write up the results and discussions, revising the paper critically. He also read and approved the final version of the paper.

Conflict of interests:

The author declares that there is no conflict of interest.

Data Availability:

All the data are presented in the manuscript.

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