The Effect of Constructive Alignment in a Flipped Writing Course on Academic Writing, Self-efficacy and Attitude of EFL Learners

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Abstract: Constructive alignment has been examined in recent years as an instrumental curriculum design notion in education; however, few studies have been done regarding its effectiveness in an EFL writing course. This study examined whether designing a virtual flipped classroom based on the Constructive Alignment principles made any changes in learners' writing ability, self-efficacy, and attitude. Besides, the learners' prior learning experience was considered to study whether prior distance learning or in-person learning experience had any effects on the results. To this aim, a homogeneity test was administered and 80 students from two Iranian universities were selected as the final participants. After being assigned randomly into four groups, two experimental and two control groups, some instruments including writing tests, a self-efficacy questionnaire, an attitude questionnaire, and a semi-structured interview were utilized to elicit the data. Over a period of one semester, both the CAFG1 and CAFG2, with different prior learning experiences, as the experimental groups were taught in a constructively aligned flipped learning mode in which the course plan including both cognitive and affective domains had been organized according to CA. The quantitative data of the pretest and posttest of a paragraph writing and self-efficacy questionnaire were analyzed based on One-way ANOVA and post hoc *Scheffe's* tests indicated that both CAFGs outperformed the Non-CAFGs on paragraph writing and writing self-efficacy; however, the quantitative and qualitative data collected via writing attitude questionnaire and semi-structured interview indicated all the students' positive attitudes toward writing. Based on the findings, pedagogical implications were further provided.

Keywords: Constructive Alignment, Writing Attitude, Writing Self-efficacy, Writing Skill

Introduction

The educational system is involved in developing courses for different groups of learners. Course design in terms of logical principles can aid educators to provide the most applicable instructional interventions for learners. In this regard, *constructive alignment* (CA) as an educational concept in the course and curriculum

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design has been particularly proposed by Biggs (1996). According to Biggs (1999), the fundamental assumption of CA proposes that the whole design of a curriculum needs to follow the principles of the alignment between *the intended learning outcomes (ILOs)*, *teaching and learning activities (TLAs)*, and *assessment tasks (ATs)* to increase students' achievement. He added that the issue of misalignment may most probably bring about the learners' poor academic performance.

A move from traditional academic administration towards technology-based administration gave the opportunity to redesign it along the lines of CA. To design a technology-based setting such as *flipped classroom* (FC), it must be warranted that all components complement each other well and be perceivable for all learners. Irrespective of how easy/difficult it is to conduct a flipped classroom, designing an FC requires professional skills and pedagogical expertise (Shimamoto, 2012). In this regard, Willey and Gardner (2013) recommended that activities in an FC should engage learners and they also suggested that formative assessment should evaluate students' learning. By the same token, Egbert et al. (2015) recommended that in order to conduct an FC, it is essential to take into account the learners' proficiency levels and previous experiences.

In the present technology world, teaching writing is being more or less done in different models of the flipped classroom (Fathi & Rahimi, 2020; Su Ping et al., 2020). The writing skill with its multifaceted nature calls for diverse mental processes including self-efficacy and attitude to name but a few. Self-efficacy and attitude as the dynamic components are the determining factors that impact the learners' achievement in language classrooms. As a result, they are required to be considered the main focus in the teaching and learning setting by the educational system and the instructors. Hence, it is felt essential to focus on both cognitive and affective domains while designing a course.

While some studies have investigated the role of CA in educational settings (Jaiswal, 2019; Shamsi et al., 2022; Stamov Roßnagel et al., 2021; Wang et al., 2013), it appears that there was hardly any research, to the best of the investigators' knowledge, conducted on the impact of CA on writing self-efficacy and attitude. Besides, although some studies have focused on the role of FC on the writing performance of EFL students (Ebadi et al., 2017; Su Ping et al., 2020; Wu et al., 2020), no research studies have addressed the impact of CA on writing components, namely, self-efficacy and attitude in an Iranian EFL university context.

To address such research gaps, the present study sought to design a flipped classroom applying the constructive alignment principles for Iranian EFL learners with different prior learning experiences to explore its pedagogical potential in learning paragraph writing, and also the self-efficacy and attitude of the participants toward writing. On account of the promising results of CA in different non-English language courses (Cain & Babar, 2016; Vanfretti & Milano, 2011), it was worth investigating its impact in an English course. The other issue that differentiated this article from the previous studies was considering both cognitive and affective domains at the same time. Besides, this study targeted students with dissimilar learning experiences- a face-to-face university vs. a distant university. The goal of such a choice was to establish connections between their prior learning experience and the new learning environment. Therefore, the present investigation was one of the first attempts to propose the structure of a constructively aligned flipped classroom for paragraph writing considering both cognitive and affective domains. To this end, three main questions were formulated:

Research Question One: Is there a significant difference in paragraph writing skills between the learners with the prior distant learning experience and the learners with a prior face-to-face learning experience in a constructively aligned flipped classroom?

Research Question Two: Is there a significant difference in students' self-efficacy for writing between those who are instructed in a constructively aligned virtual flipped classroom and those who are not?

Research Question Three: Is there a significant difference in students' attitudes toward writing between those who are instructed in a constructively aligned virtual flipped classroom and those who are not?

Review of Literature

Constructive Alignment

The principles for constructive alignment were present in Tyler's 1949 book: *Basic principles of curriculum and instruction*. However, CA was thoroughly expressed in Biggs' (1996) paper that was furthermore elaborated in his book:

A good teaching system aligns teaching methods and assessments to the learning activities stated in the objectives, so that all aspects of the system are in accord in supporting appropriate student learning. This system is called constructive alignment, based as it is on the twin principles of constructivism in learning and alignment in teaching (Biggs, 1999, p. 11). Constructive alignment is based on the constructivist theory which holds that knowledge is constructed by people's active engagement and their experiences. Accordingly, in a constructivist classroom, the instructor's main duty as a facilitator is to create a collaborative setting in which the learners are actively involved in their learning. Constructivism asserts that utilizing interactive activities in which learners play active roles can lead to more motivating learning and engagement than the activities in that learners have passive roles.

Constructive alignment begins with determining what the learners are expected to achieve as the intended learning outcomes. Subsequent to specifying the ILOs, the teaching/learning activities linked to the ILOs are defined to confirm that what is being taught is aligned with the course/program expectations. Finally, the assessment tasks are developed and aligned with both ILOs and TLAs.

Constructive alignment approach has been under consideration in recent years from a policy-making perspective (e.g., Ruge et al., 2019) under the premise that CA may work for implementing Outcomes-Based Education in reaction to the pressure on universities' responsibility for educational quality and efficiency (Liu et al., 2012). Outcome-based education and CA have received attention as worthwhile means of improving instruction via diagnosing the gaps between intended and actual learning. Generally speaking, the heart of CA is to manage the learning process in such a way that learners engage in meaningful learning (Biggs, 2014).

Recently, CA has been investigated in a few studies from some dimensions (Hailikari et al., 2021; Stamov Roßnagel et al., 2021; Wang et al., 2012). Generally, the results of these investigations indicated that CA contributed to student learning. The present work was inspired by Shamsi et al. (2022). They intended to find if the constructive alignment could help the learners to improve their writing skills, learning approach, and higher thinking. Eventually, they found it influential in TEFL. Nevertheless, some differences can be observed between Shamsi et al. (2022) study and the current work. The curriculum of the writing course was designed based on CA, but merely the cognitive domain was concentrated. In the present study, both cognitive and affective domains were focused on in designing the course outline because self-efficacy and attitude as the affective factors were two major variables. Also, the learners participating in the writing course had different learning experiences. The aim was to discover whether constructive alignment worked for all learners similarly.

Flipped Classroom Model

The necessity of flipped classroom was felt when several students missed the class because of some reason. By the arrival of the FC, the inside classroom events and the outside classroom activities were inverted. Flipping "moves the lectures outside the classrooms and uses learning activities to move practice with

concepts inside the classroom" (Strayer, 2012, p. 171). The most well-known pre-class activities are watching the captured videos which are employed in a flipped way of instruction. In-class activities comprise diverse collaborative student-centered activities (Han, 2015).

The flipped classroom model supports constructivism by allocating the class time for inquiry-based learning and engaging in interactive activities (Bergmann & Sams, 2014). Generally, the main features of flipped classrooms are mentioned as four pillars of the F-L-I-P model *flexible environment*, *learning culture*, *intentional content*, and *professional educator*. A flexible environment refers to the combination of both online learning and physical classroom instruction. Learning culture refers to the learners' active participation in collaborative activities before and during class time. The captured videos provided before class time are the intentional content of the FC. Ultimately, the professional educator is the instructor who constantly observes students' progress, provides feedback, and evaluates their performance as well.

Investigators have examined the impact of FC not only on learners' academic success (O'Flaherty & Phillips, 2015) but also on some language learning skills such as writing (Zou & Xie, 2019; Fathi & Rahimi, 2020). Boyraz and Ocak (2017) investigated the impact of flipped classrooms on EFL students' academic success in a compulsory English preparation class and it was revealed that the FC developed the students' academic success in general English after one academic year. The results of the interview, further, indicated the participants' positive perceptions towards the FC.

Fathi and Rahimi (2020) in studying the role of FC on writing skills demonstrated the significant role of FC in learners' global writing performance and writing fluency; however, its impact on the students' writing complexity and accuracy fell short of significance. Similarly, Zou and Xie (2019) studied the impact of two flipped learning models, just-in-time teaching (JiTT) and peer instruction (PI) flipped classrooms on EFL students' writing skills. The results indicated that the English writing skills of the participants of both groups developed significantly. Also, both JiTT and PI developed the students' motivation and tendency toward critical thinking.

Writing Self-efficacy

Individuals in terms of being exposed to various writing tasks may have various beliefs about themselves (Bruning & Kauffman, 2016). In this respect, two factors that have been recognized as influential in learners' motivation to engage in any activity especially writing are "their beliefs related to and their predispositions towards the task" (Wright et al., 2019, p. 66). Self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performance" (Bandura, 1997, p. 21) refers to how certain the individuals are about their capabilities in performing a task. Self-efficacy as a motivation construct has been derived from the social cognitive theory developed by Bandura (1997). The social cognitive theory states that individuals get involved in performing a task, analyze it, set their own goals, plan systematic strategies to adopt, and think about their future performance of the very task in order to achieve the intended outcomes. This theory posits that learning occurs in a social setting with a dynamic and reciprocal interaction of personal factors including cognitive, affective, and biological events, behavior, and environment. Simply speaking, the way people describe their performance will affect their environments and self-beliefs, and these in turn affect the people's subsequent performance. Bandura (1997) stated four sources of self-efficacy including *mastery experience*, *vicarious modeling*, *verbal persuasion*, and *physical and affective states*. Badura's theory of self-efficacy portends that an individual's perception of self-efficacy will have an influence on his/her subsequent performance and growth.

A large number of research have examined the role of self-efficacy in learning skills and nearly all have pointed to the fact that self-efficacy can predict the learners' upcoming performance. In a research done by Bernacki et al. (2015), self-efficacy was examined frequently to observe its variability during learning and how the individuals' self-efficacy related to their problem-solving performance. The findings

suggested that self-efficacy varied during learning, the learners considered multiple aspects of performance to inform their efficacy judgments, and also changes in efficacy influenced self-regulated learning processes and outcomes. In addition, Teng et al. (2018) in a study to validate the multidimensional structure of writing self-efficacy in an EFL context found small to moderate correlations between the three dimensions of self-efficacy and writing performance.

Methodology

Design of the Study

The current study adopted an explanatory sequential mixed-methods design with students from two universities in Iran. There were generally four groups whose writing skills, self-efficacy, and attitude were measured via pre-test and post-test.

Participants

Primarily, there were 100 students studying English Translation at two universities in Iran, Payame Noor University as a distant university and Azad University as an in-person university, taking a paragraph writing course. Their ages ranged from 20 to 22 (M=21.07, SD=1.24). Their mother tongue was alike, i.e., Persian. Besides, according to the results of a proficiency test known as the *Quick Oxford Placement Test* (*QOPT*) on the participants' homogeneity regarding their English language proficiency, 80 intermediate participants (50 females and 30 males) were chosen as the final subjects of the study. The participants were randomly assigned into two constructively aligned flipped classrooms as the experimental groups and two non-constructively aligned flipped classrooms as the control groups.

Instruments

The Quick Oxford Placement Test

The participants' homogeneity based on their general language proficiency was checked using *QOPT* consisting of 60 multiple-choice items. Its reliability was estimated by Shokrpour et al. (2019) and it appeared to be 0.91.

Paragraph Writing Test

To extract the participants' ability in writing comparison and contrast paragraphs, the participants in all groups wrote two paragraphs as the pretest about "*The similarities between a school and college*" and "*The differences between a school and college*", respectively. At the end of the writing course, for the posttest, the students wrote two more paragraphs about "*The similarities between childhood and adolescence*" as a comparison paragraph and "*The differences between childhood and adolescence*" as the contrast paragraph, respectively. All four topics were chosen from a study conducted by Shamsi et al. (2022) due to the fact that it inspired the current work.

Writing Self-Efficacy Questionnaire

This questionnaire consisting of 25 items about learners' confidence in the writing process was driven from Donald O. Prickel's research in 1994. This questionnaire with Cronbach's Alpha of 0.89 was found as a

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useful instrument. Also, according to the results of the pilot study in the current work, this questionnaire obtained Cronbach's Alpha of 0.86.

Writing Attitude Questionnaire

This 26-item instrument categorizing from the high level of apprehension to the level of enjoyment was adapted from the Daly-Miller Test (1975) to measure how the students felt and acted in constructive and non-constructive learning settings. Its reliability was .94., thus, it was found suitable to assess the required data about the learners' attitude towards writing. The validity of the test was approved through expert judgment. Two of the refereed L2 teachers opined over the tests administered. Besides, to calculate the reliability of the test, Cronbach alpha was calculated which was found to be .82.

Semi-Structured Interview

To supplement the data regarding attitudes and perceptions toward writing instruction, a semi-structured interview containing 6 open-ended questions was conducted. The interview questions were driven from the study conducted by Rahimi and Fathi (2021) about writing attitude and self-efficacy.

Textbook

The valid source determined to extract the structure of paragraphs was the book entitled *Paragraph Development* (Arnaudet & Barret,1981).

Course Outline

The course outline was constituted based on the CA. It was composed of the ILOs, TLAs, and ATs. To design this course outline, SOLO taxonomy, Bloom's taxonomy, and Krathwohl's affective domain taxonomy were utilized because they constitute the process-oriented models and list the levels of understanding from low to high. The course general objectives were as follows:

Receive the information provided
Exhibit basic knowledge of previously learned content by remembering the basic concepts.
Demonstrate factual and practical knowledge by organizing, describing, and mentioning main ideas.
Articulate their own insights about the videos
Apply acquired knowledge and skills practically.
Contribute meaningfully to class discussion.
Analyze and **Evaluate** information by doing comparison and contrast, relating the ideas, and explaining and suggesting solutions.
Create comparison/contrast paragraphs by the use of an academic writing style.
Demonstrate self-reliance when writing independently.
Accept their own weaknesses

To achieve them, some activities aligned with such objectives were set including watching pre-class videos and reading the textbook, in-class discussion, giving a presentation of written assignments, self-report, evaluating and modifying their own papers, and doing in-class activities independently. Moreover, to check the learners' achievement, some assessment tasks aligned with the ILOs and TLAs were determined. They included writing a summary of the key points of the videos, unscrambling a paragraph, recognizing the type of sentences, writing supporting sentences, writing a reflection paper, drawing a tree map, completing a Comparison/Contrast Paragraph, having the ability to solve their peers' problems, answering the questions, analyzing a paragraph, writing a self-evaluation, writing a paragraph, and evaluating paragraphs.

Data Collection Procedure

Prior to embarking on treatment, the students' homogeneity was checked by the use of a QOPT and accordingly, eighty out of one hundred intermediate-level participants were chosen. They were randomly assigned into two experimental groups entitled CAFG1 and CAFG2 and also two control groups entitled Non-CAFG1 and Non-CAFG2. The CAFG1 and Non-CAFG1 were from Payame Noor university and they had experience in a distant learning setting whereas the participants of the CAFG2 and Non-CAFG2 were chosen from Azad University whose foundation was on face-to-face learning.

The following day, as the pretest of paragraph writing, one comparison paragraph and one contrast paragraph were written by all four groups of the study within 90 minutes. Next, the Writing Self-Efficacy (WSE) questionnaire was employed to find the individual's initial confidence level in their abilities in performing a writing task. Furthermore, the Writing Attitude Questionnaire was administered with a short time interval to measure how the students felt towards writing. Subsequently, the experimental groups received a course outline to get acquainted with the instruction process in advance.

For the initial two sessions in the experimental groups, the teacher shared a video involving the general structure of a paragraph. Inside the classroom which was a virtual flipped classroom administered via Skype, every student in the classroom talked about a question. Then, the teacher provided some paragraphs including a blank space in order that the students fill in. Moreover, the learners recognized the parts of the paragraphs, deleted the inappropriate sentences from the group of sentences, and subsequently, organized the appropriate sentences logically and employed the transition words presented. For the assessment, the students wrote a summary of the key points, unscrambled the inconsistent parts of paragraphs and wrote a topic sentence and some supporting sentences for a topic.

Prior to the two next sessions, the learners watched videos about types of sentences and sentence structure. Then, when the learners were in the classroom, the teachers presented some sentences of different kinds, and the learners recognized their types. For the assessment, the learners were asked to write two compound and complex sentences about a topic, and one more topic was presented as well so that the learners write at least two sentences of all types.

For the fifth session, the video consisted of organizing a paragraph by drawing a tree map. In the classroom, the learners designed some tree maps concerning the paragraphs. For the assessment, initially, the learners wrote a reflection paper. Next, they drew a tree map about a paragraph. Later, they wrote appropriate topic sentences about the tree maps provided by the teacher.

Prior to the sixth and seventh sessions, the videos were about the structure of the Comparison paragraph. Inside the class, the learners had a comparison paragraph including some blanks to complete using sentence connectors. The assessment was to complete a comparison paragraph. The instruction of the Contrast paragraph took two sessions, too. It followed the same trend as the Comparison paragraph.

Previous to the tenth and eleventh sessions, the learners watched a video about how to evaluate a paragraph. Thus, the learners evaluated a paragraph inside the classroom. According to the amount of time left, the volunteer learners presented their evaluated papers and all together discussed them and shared their ideas. For assessment, the teacher provided a paragraph and the learners evaluated it by identifying the writing challenges and developing related strategies.

For the twelfth session, the students watched a video containing a review of paragraph development. In the classroom, the learners wrote about one of the topics suggested by the teacher. Then, the learners wrote a self-evaluation. In the thirteenth session, the teacher returned the learners' own papers to be evaluated and modified, if necessary, for twenty minutes. Then, all the papers were checked while all students were watching.

The control groups participated in a virtual flipped classroom; however, the course was not constructively aligned. The trend of instruction in such a setting (i.e., non-constructively aligned flipped classroom) was to watch the videos provided by the teacher and to read the paragraph development book prior to class time. In such an instructional course, the learners did not know anything about the details of the course except studying the materials before coming to class. The main part of the class time was dedicated to doing the book exercises and if any time remained by chance, they could write a paragraph about a topic. It needs to be mentioned that there was not a formative assessment because the final test result was the criterion.

As the posttest, the students wrote a comparison and a contrast as well, each one containing at least four similarities and four differences, respectively, in 100 minutes. Scoring the paragraphs was done by the use of the writing rubrics called a comparison and a contrast scoring module by Soleimani et al. (2008). Finally, the learners completed the same SEW. In a short time interval, another questionnaire was administered to measure the participants' attitudes toward writing. Besides, qualitative data regarding the learners' attitudes was assembled as well through the semi-structured interview. Merely 21 participants volunteered to participate in the interview. Each one-on-one interview took 15 minutes and was audio-recorded for analysis with the permission of the participants.

Results

Subsequent to approving the normal distribution of the scores, for the inferential data analysis One-way ANOVA and post-hoc *Scheffe's* tests were employed to check how the participants with prior learning experiences performed in paragraph writing, writing self-efficacy, and writing attitude.

Performance of the Participants on Paragraph Writing

Initially, the mean scores of paragraph writing in the experimental groups (CAFG 1, CAFG 2) and control groups (Non-CAFG 1, Non—CAFG 2) were compared to reveal how homogenously/differently they performed prior to and after treatment (See Table 1).

Table 1

Descriptive Statistics of Paragraph Writing of the Groups

	Group	N	M	SD	SEM
Paragraph Pretest Score	CAFG 1	20	14.25	2.59	0.67
	CAFG 2	20	13.4	2.18	0.48
	Non-CAFG 1	20	14.20	3.10	0.69
	Non-CAFG 2	20	14.25	3.72	0.83
Paragraph Posttest Score	CAFG 1	20	36.65	2.00	0.44
	CAFG 2	20	35.7	2.43	0.54
	Non-CAFG 1	20	25.7	4.13	0.92
	Non-CAFG 2	20	25.55	3.11	0.69

Table 1 indicates that according to the mean scores, all four groups gained nearly similar mean scores ranging between 13 and 14 in terms of their paragraph writing ability prior to instruction initiation. On the contrary, in the posttest, there can be observed differences between the means of paragraph writing of experimental groups and control groups. Thus, the significance of the difference among all four groups in the posttest of writing is shown in (Table 2).

Table 2

One-Way ANOVA of Writing Post-Test of the Groups

	Sum of Squares	df	Mean Square	F	Sig.
Writing					
Between Groups	2235.3	3	745.1	81.14	.000
Within Groups	697.9	76	9.183		
Total	2933.2	79			

The results of Table (2) illustrate that there was a significant discrepancy among the four groups concerning their paragraph writing ability (F (3, 76) = 81.14, P= 0.00 <0.05). In other words, at least two of these groups were significantly different based on post-test scores. This suggests that the differences existing after the treatment are the result of treatment. The results of the post hoc Scheffe's test to define the precise places of differences among the means of the groups are displayed in Table 3.

Table 3

Results of Scheffe for Posttest Writing: Multiple Comparisons

(I) CA	(J) CA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Upper Bound	Lower Bound
CAFG 1	CAFG 2	.95	.958	.805	-1.789	3.689
	Non-CAFG 1	10.95(*)	.958	.000	8.21	13.689
	Non-CAFG 2	11.1(*)	.958	.000	8.36	13.839
CAFG 2	CAFG 1	.95	.958	.805	-3.689	1.789
	Non-CAFG 1	10(*)	.958	.000	7.26	12.739
	Non-CAFG 2	10.15(*)	.958	.000	7.41	12.889
Non-CAFG 1	CAFG 1	-10.95(*)	.958	.000	-13689	-8.21
	CAFG 2	-10(*)	.958	.000	-12.739	-7.26
	Non-CAFG 2	.15	.958	.999	-2.589	2.889
Non-CAFG 2	CAFG 1	-11.1(*)	.958	.000	-13.839	-8.36
	CAFG 2	-10.15(*)	.958	.000	-12.889	-7.41
	Non-CAFG 1	-.15	.958	.999	-2.889	2.589

* The mean difference is significant at the .05 level.

The results of Table 3 indicate that the differences among the CAFG1 and CAFG2 groups were not statistically significant. In addition, the Non-CAFG1 did not differ significantly from Non-CAFG2. On the contrary, it displayed that the experimental groups' performance differed significantly from both Non-CAFG1 and Non-CAFG2 groups, now that the obtained value was smaller than 0.05 (p=0.00).

Performance of the Participants on Writing Self-Efficacy

In addition to paragraph writing, self-efficacy was another main variable focused on in this study. By administering the SEW, it was attempted to determine whether different treatments affected the learners' level of self-efficacy. Table (4) summarizes the descriptive analysis of the data of self-efficacy scores before- and after treatment for all groups under the study.

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Table 4

Descriptive Statistics of Writing Self-Efficacy of the Groups

	Group	N	M	SD	SEM
Self-efficacy Pretest Score	CAFG 1	20	2.89	.311	.03
	CAFG 2	20	2.82	.474	.02
	Non-CAFG 1	20	2.77	.367	.08
	Non-CAFG 2	20	2.70	.421	.07
Self-efficacy Posttest Score	CAFG 1	20	3.47	.137	.04
	CAFG 2	20	3.27	.113	.02
	Non-CAFG 1	20	2.99	.397	.06
	Non-CAFG 2	20	2.87	.335	.07

As it can be observed in Table 4, all groups had the same self-efficacy level before treatment. By receiving instruction, the self-efficacy in experimental groups enhanced more. To check if the differences among the means were statistically significant, the one-way ANOVA procedure was run. The results are provided in Table (5):

Table 5

One-Way ANOVA of Writing Self-Efficacy of Four Groups

	Sum of Squares	df	Mean Square	F	Sig.
Writing Attitude					
Between Groups	4.392	3	1.464	19.371	.000
Within Groups	5.744	76	.076		
Total	10.136	79			

The results of Table 5 indicated that there was a significant discrepancy among the four experimental groups concerning their writing self-efficacy (F (3.76) = 19.371, P= 0.00 <0.05). The results of a post hoc Scheffe's test appear below (See Table 6):

Table 6

Results of Scheffe for Self-Efficacy: Multiple Comparisons

(I) CA	(J) CA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Upper Bound	Lower Bound
CAFG 1	CAFG 2	.208	.086	0.87	-.020	.436
	Non-CAFG 1	.483(*)	.086	.000	.254	.711
	Non-CAFG 2	.599(*)	.086	.000	.371	.827
CAFG 2	CAFG 1	-.208	.086	.087	-.436	.020
	Non-CAFG 1	.275(*)	.086	.012	.046	.503
	Non-CAFG 2	.391(*)	.086	.000	.163	.619
Non-CAFG 1	CAFG 1	-.438(*)	.086	.000	-.711	-.254
	CAFG 2	-.275(*)	.086	.012	-.503	-.046
	Non-CAFG 2	.116	.086	.541	-.111	.344
Non-CAFG 2	CAFG 1	-.599(*)	.086	.000	-.827	-.371
	CAFG 2	-.391(*)	.086	.000	-.619	-.163
	Non-CAFG 1	-.116	.086	.541	-.344	.111

According to the results in Table 6, it can be observed that the differences between the experimental groups were not statistically significant. Besides, the control groups did not act so differently. However, it indicated

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that both experimental groups performed significantly different from both control groups since the obtained values were smaller than 0.05 (p=0.00 and .012, respectively).

Performance of the Participants on Writing Attitude

The learners' attitude towards writing was the third main variable which was measured by the use of an attitude questionnaire. The descriptive results of the writing attitude are provided in Table 7.

Table 7

Descriptive Statistics of Writing Attitude of the Groups

	Group	N	M	SD
Paragraph Pretest Score	CAFG 1	20	2.425	.30
	CAFG 2	20	2.345	.33
	Non-CAFG 1	20	2.264	.31
	Non-CAFG 2	20	2.333	.36
Paragraph Posttest Score	CAFG 1	20	3.27	.02
	CAFG 2	20	3.35	.07
	Non-CAFG 1	20	3.35	.09
	Non-CAFG 2	20	3.28	.05

Table 7 reports the mean scores of the groups of the study in both pre-and post-attitude questionnaires. By comparing the learners' performances on both tests, some changes can be observed. Moreover, by looking at the SD column it is clear that the scores were more homogeneous in the posttest in all groups of the study. Besides, to elicit more precise information about the participants' writing attitude, a semi-structured interview was administered with the volunteered participants after the course and it presents the main important findings based on the interviewees' responses to the questions. The interviewees regarding the question of whether they enjoyed the writing instruction course through CA showed satisfaction with their writing ability and they described writing not as boring as it seems. Moreover, they believed that flipped writing course designed based on constructive alignment principles or not was influential on their English writing. The participants of the study, aside from what treatment they were exposed to, experienced a less anxious course and felt more self-confident. They told their ideas about whether they experienced less negative feelings during English writing. They believed that by being aware of the paragraph writing details, they are good at writing now and their writing texts are more comprehensible. Besides, now that they have faced flipped learning, they feel that such a course should be included in normal English writing classrooms. All in all, the participants compared such a course with other EFL writing courses they had experienced in other classes and mentioned their opinions.

Discussion

Constructive alignment as a teaching design stands on a fundamental premise that the curriculum is to be designed such that learning activities and assessment tasks are aligned with the intended learning outcomes (Biggs, 1999). Drawing on Biggs' CA, in the current study we explored the writing performance, writing self-efficacy, and writing attitude of the university students with different prior learning experiences in both constructively aligned virtual flipped classrooms and non-constructively aligned virtual flipped classrooms.

According to the results of the post-test writing, both experimental groups in the constructively aligned flipped classroom performed significantly better on the post-test of paragraph writing than on the pre-test. Meanwhile, having prior learning experience in a distant university or an in-person university did not lead to any statistically significant differences. Accordingly, it could be proposed that constructive

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alignment was influential in designing a flipped writing course because it resulted in developing the learners' paragraph writing. Such noteworthy findings could be related to some specific reasons. The more desirable performance and high self-efficacy of the learners of the experimental groups, exclusive of their previous learning experience, after participating in the constructively aligned flipped classroom could be associated with the principles of the CA according to which the intended objectives, activities, and assessment of the writing course were designed and subsequently delivered to the learners before the treatment initiation and as a result, they could know everything about the whole course a priori. Also, the role of the formative assessment should not be underestimated.

In harmony with the findings in this regard, Biggs and Tang (2007) claimed that CA was a suitable instructional design for advancing EFL students' performance. Hence, the major justification for the finding of the present work might be due to the awareness of the coherent link between what activities the learners were engaged in and the formative assessment in the constructively aligned flipped classroom. In two studies by Hailkari et al. (2021) and Wang et al. (2013), all components of constructive alignment played notable roles in adopting the deep learning approach. Via the ILOs and TLAs the learners were supplied the opportunities to actively engage along the course and according to the requirements of the course adopt a deep approach. Likewise, the ATs requiring the learners' active engagement persuaded the learners to take a deep approach toward learning. Besides, the results of the current work conformed to what Shamsi et al. (2022) found about the EFL learners in a constructively aligned course. Constructive alignment not only improved the learners' writing skills notably but also caused them to move away from the surface approach because the constructive alignment by providing active participation motivated the participants to maximize their concentration and as a result, adopt a deep approach toward learning.

However, this finding can be in contrast with what Wittroc (1974) stated about cognitive psychology in accordance with which the learners' prior experiences and abilities are crucial and of high importance in learning and they can lead to diverse results. Cognitive theory signifies that learning can be predicted based on what prior experiences the learners take to the learning setting.

Also, both experimental groups, exclusive of their a priori learning experience, had almost equally enhanced self-efficacy in the post-test in the wake of training. It recommended that considering both affective and cognitive domains in designing a course by the use of CA led to a high level of self-efficacy toward writing. Thus, this belief that flipped classrooms could alone lead to notable improvement was beginning to fade.

Besides, findings regarding self-efficacy were in line with Habel's (2012) investigation which was done to discover changes in academic self-efficacy in a course designed along the lines of CA. The findings revealed that courses that provide an alignment between the learning outcomes, activities, and assessment can be highly fruitful in promoting academic self-efficacy. One justification for such an increase in self-efficacy can be due to focusing on intended learning objectives, specific tasks and strategies that the learners undertake, and then subsequent assessment. On the one hand, the syllabus design activity outlined took place with the goal to enhance the students' academic writing self-efficacy. The focus on intended learning outcomes, particular tasks, and strategies, and assessment was the vehicle by which self-efficacy improved. The structured and planned curriculum design gives students experiences in the enactive mastery (Bandura, 1997) of specific domains, which contributes towards self-efficacy. Teng et al. (2018) in an investigation on writing self-efficacy reported considerable correlations between writing self-efficacy and motivational beliefs and they also proposed that self-efficacy interacted with the writing activities and goals for learning to write. Accordingly, they concluded that what beliefs the learners have about their own abilities would influence their ideas about the importance of the course.

Finally, regarding the learners' attitude toward writing, they were instructed to fill in a questionnaire based on their attitudes and ways of learning in the pre-test and their attitudes and ways of learning in the post-test, respectively. In light of the whole results, all the learners engaged in the flipped

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setting, whether constructively aligned or non-constructively aligned, could increase their individual attitudes towards writing. All these results directed the attention towards the magic role of the flipped classroom, being designed constructively aligned or non-constructively aligned, and it can be considered as a powerful model through which the learners will be actively engaged in activities and increase their attitude about writing skills. This recommends that within a flipped academic setting, flipped learning model itself implies that learners have a positive attitude to writing.

Conclusion and Implications

Adopting an explanatory sequential mixed-method design, the current study indicated that constructive alignment was an effective course design tool for improving the EFL students' writing performance and writing self-efficacy exclusive of what prior learning experiences they had. In other words, whereas the participants of the experimental groups had a different prior learning experience, the constructively aligned flipped classroom had nearly an equal impact on them. Moreover, it strongly supported that flipped courses aside from being designed based on constructive alignment principles or non-constructive alignment principles increase students' writing attitude. Based on the findings, this study might be deemed noteworthy due to some points. Initially, it sought to design a course considering both cognitive and affective factors in a constructively aligned flipped classroom. The findings of the study might allude to a more productive and well-organized language teaching procedure to improve Iranian EFL learners' academic writing performance. The findings might also put forward operable techniques to meet the learners' writing needs and make them actively engaged in different collaborative and individual writing tasks. Similarly, the results of this work would show the instructors a sound direction to enhance the learners' writing skills with regard to their prior learning experiences. Besides, evaluating the learners' writing self-efficacy and writing attitude raises the instructors' awareness towards considering affective domains while teaching writing.

Whereas the findings of this study can fruitfully augment the existing research, some limitations need to be regarded in coming investigations. To start with, in spite of several types of paragraphs, the academic writing skill in the present study was measured on merely comparison/contrast paragraphs. Also, the learners were not asked to express their impressions about the alignment of the course. In other words, they did not describe how clearly they perceived the components of CA. Finally, the domains of learning are cognitive, affective, and psychomotor. In designing the flipped classroom of the current study, the first two domains i.e., cognitive and affective domains, were considered.

On the other hand, it can be a good idea to explore the effect of a constructively aligned course on other psychological factors, like writing motivation, to find out more about the benefits of CA. Moreover, EFL researchers could further compare the impact of a constructively aligned writing course in a traditional classroom and flipped classroom. Finally, designing the reading, speaking, and listening courses according to the constructive alignment principles might broaden our understanding of the CA.

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Declaration of Conflicting Interests

No potential conflict of interest was reported by the authors.

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