

Technology-based instructional intervention into an EFL writing classroom

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Abstract

The aim of this study is to highlight the role of technology-based instructional intervention in enhancing the composing competence of struggling student writers at Majma'ah University (MU) in Saudi Arabia. Such instructional choice issues from the belief that the students have experiences and stories to share through writing. In the current intervention, a total of 26 participants enrolled in a short essay course offered by the Community College and the College of Education optionally participated in the study. They were equally divided into experimental and control groups, respectively. While the experimental group received both traditional and online instruction, using the MU Learning Management System, the control group received traditional instruction only. The experimental group outperformed the control group in the post-intervention test. Evidence from the quantitative and qualitative data attests to the assumption that instructional technology could significantly enhance learners' composing skills. Thus, the English programme administrators are strongly recommended to post and conduct most writing classes online.

Keywords: Intervention, SRSD, rubrics, revision, drafting, self-revision.

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1. Introduction

In 2015, Community College (CC) students were advised to use an Academic Business Form (ABF) to submit their inquiries to the College authorities. This form was designed in an attempt to overcome communication problems resulting from the use of various spoken versions of the Najdi dialect (an Arabic dialect spoken in the central region of Saudi Arabia) in the students' written inquiries. For the most part, these inquiries were unintelligible even to Arabic-speaking faculty recruited from other Arab countries. The ABF included a number of obligatory fields that pertain to the inquiry topic, so that if the students choose to detail it in the way they speak, College officials could still understand the message. Thus, it is plausible to argue that students' failure to communicate in writing in their mother tongue is indicative of their predicament in the EFL writing classroom. Indeed, research findings confirm that good writers in the first language (L_1) are also good writers in the second language (L_2) and vice versa (Noor, 2007) due to the possibility that literacy skills can transfer across languages (Carson, Carrell, Silberstein, Kroll & Kuehn, 1990; Lasagabaster, 2001; Krashen & Lee, 2004).

The Majma'ah University (MU) students' predicament in an EFL writing classroom is aggravated by at least three factors. First, a recent study, i.e., Ezza (2017) informs that the vast majority of MU writing instructors were either inexperienced Teaching assistants or faculty members who were not aware of writing theory and the best instructional practices that could enhance students' composing skills. They were found to use the same rubrics to assess assignments written as answers to exam questions in writing, linguistics and literature courses; thus, violating the universal principle that good writing varies across genres and disciplines (Bazerman et al., 2005; Carter, 2007; Hudd, Sardi & Lopriore, 2013; Hyland, 2004; Nesi & Gardner, 2006; 2012; Slomp, 2012).

Second, many curricular constraints negatively affect writing instruction at MU. For instance, instructors are required to teach all the course materials before the terminal examination regardless of whether the students have acquired and mastered the relevant writing skills. This situation raises the question as to whether instructors should teach the textbook prescribed as the main source for the course or teach the students. In principle, this distinction is one made by Darling-Hammond (1989) to contrast bureaucratic teaching and professional teaching. Bureaucratic teaching requires teachers to follow policies planned by educational authorities and supervised by their immediate seniors, whereas professional teaching pays considerable attention to knowledge as the basis for instructional practices and decisions. While both teaching conceptions characterise the MU educational scene, it seems that bureaucratic teaching is more preferable to decision-makers. This conclusion receives support from the fact that faculty cannot use literacies and skills acquired from intensive and extensive training to improve curriculum for the fear that any additional instructional procedures might interrupt their plans to cover the course materials.

Third, grammar, vocabulary and reading courses do not directly provide appropriate input for the writing courses. In other words, MU English departments prescribe textbooks from *Interactions Access* to teach grammar, vocabulary and reading courses, but use textbooks from a different series, i.e. *Effective Academic Writing*, to teach writing courses. For the most part, the language focus sections in the latter are entirely irrelevant to the content of the former; thus, complicating the students' job in using previously acquired knowledge to enhance their performance in current tasks. This paper advocates that the view that the relevance of a current course material to what has previously been covered could play a vital role in facilitating both teaching and learning. In fact, it is not hard to find theoretical support for this conclusion in the relevant literature. According to Brumfit (1984, p. 79), while the nature of syllabus sequencing 'can be a matter of trial and error', it should be built 'on what has already been done, in similar settings if new work is being started, in the past if revision is being undertaken'. More specifically, sequencing is conceived to be a key feature of ELT textbooks that 'should cohere both externally and internally with other books in series' (Sheldon, 1988, p. 243).

The curricular and instructional obstacles, just reported further aggravate the CC mission to enrol and qualify underachieving secondary school graduates for university education. Therefore,

instructional intervention needs to be integrated into mainstream teaching to enable the students to compose satisfactorily. Generally speaking, an instructional intervention can be conceived as a process, whereby writing instruction is customised to enable all the students enrolled in a writing course to write satisfactorily (Friedrich, 2006). It is unfortunate that the relevant literature does not show familiarity with such instructional strategies on the part of instructors in the Saudi context. That is, writing instructors as informed by research findings reported above did not seem to attach any significance to the vital role such strategies play in improving the quality of writing produced by the students. Therefore, this paper maintains that the use of instructional intervention can enable underachieving CC students to acquire composing skills similar to those of their peers at the College of Education (CE). In principle, low-achieving secondary school graduates are required to study for two academic years at CC to qualify for transfer to the English Department at CE. Both groups study the same courses before they merge into the same classroom in the third year. For the research purpose, CC students serve as the experimental group while CE students serve as the control group. Three intervention strategies have been selected for integration into the classroom activities of the course ENG221 (e.g., Essay Writin): track change feature, multiple drafting and self- and peer-revision. In this connection, there are two questions that the paper intends to answer:

- i. How effective is the instructional intervention in improving the participants' composing skills?
- ii. How do the students perceive the instructional intervention employed to enhance their composing skills?

2. Conceptual background

Henry G. Widdowson, a world-renowned linguist and a series editor, experiences writing as an 'irksome activity and ordeal to be avoided whenever possible' (1983, p. 33). Such a reaction to writing difficulty pertains in part to the fact that composing a text requires a combination of cognitive, linguistic, social and physical processes at the same time (Harris, Graham & Mason, 2003; Pea & Kurland, 1987; Troia & Graham, 2003). In other words, writers should simultaneously coordinate efforts to generate and organise ideas, choose appropriate linguistic constructions, negotiate meaning with anticipated audience and pay attention to the writing mechanics. Needless to say, these writing challenges have serious repercussions for pedagogical practices in the classroom. That is, as Kirby and Liner (2013, p. 9) argue, writing challenges can result in frustration among teachers to the extent that those who cannot observe progress in the students' writing might 'succumb to the old thinking that writers really are born, not taught'. Similarly, Troia & Graham (2003, p. 75) maintain that writing challenges create anxiety, avoidance and frustration among teachers. Yet, teachers are widely argued to be 'not highly effective at helping students to gain the critical knowledge and skills required for competent, expository and persuasive prose' (Santangelo & Olinghouse, 2009, p. 1).

Lest writing challenges barricade students' education, future employment and other life pursuits (Santangelo & Olinghouse, 2009), literacy theoreticians and classroom researchers have been making extensive efforts to integrate best instructional practices (interventions) into mainstream teaching to enhance the composing skills of (struggling) students. The literature emphasises that such an instructional choice issues from the belief that writing can indeed be taught given the fact that students have language, thoughts, experiences and stories to share through writing (Kirby & Liner, 2013). Also, students are conceived to possess multiple strengths and are capable of development regardless of their cultural background, socio-economic status and gender (Santangelo & Olinghouse, 2009, p. 2). Thus, this section reviews the literature pertaining to the best instructional practices that have to date been devised to improve the composing skills of struggling students. It particularly attempts a definition of the term '*intervention*', details the defining characteristics of struggling student writers and reports the major sources of the best instructional practices.

To begin with, Oxford Advanced Learner's Dictionary (2016, p. 800) defines the word 'intervention' as 'action taken to improve or help a situation'. In line with this general meaning, research into writing holds that 'intervention' is an additional instructional support made over and above mainstream

teaching to enable underachieving students to become proficient writers (Graham, 2008; Elander, Pittam, Lusher, Fox & Payne, 2010; Harris & Graham, 1999; Harris, Graham & Mason, 2002a; Harris, Graham, Mason & Saddler, 2002b; Moreira et al., 2015; Shapiro, 2011). The need to integrate intervention into core teaching stems from the consideration that mainstream teaching of EFL/ESL writing cannot provide the students with 'all instructional assistance they need to become proficient writers' (Harris & Silva (1993, p.525)). Thus, practitioners add extra instructional measures to increase students' engagement with the school as a key to success and, thus, reduce poor academic performance and school dropout (Moreira et al., 2015). Also, Kirby and Liner (2013, p. 11) contend that both skilled and unskilled student writers have thought, linguistic competence and experience to convert into a written text. Therefore, with effective coaching, all students can 'become better writers, no matter how reluctant they may be and how many doubts they might have'.

In attempts to deal with writing difficulties experienced by struggling writers, writing theoreticians and classroom researchers introduced comprehensive, evidence-based interventions to overcome all these writing challenges and, thus, enable struggling writers to 'become fluent, independent, self-regulated, goal-oriented learners' (Harris et al., 2002a; 2002b, p. 111). Generally referred to as best instructional practices, such interventions have to date been conceived to issue from two major approaches: meta-analysis (MA) of previous empirical research (Bangert-Drowns, 1993; Goldberg, Russell & Cook, 2003; Graham & Perin, 2007a; Hillocks, 1986) and self-regulated strategy development (SRSD) (Graham, 2008; Harris et al., 2012; Santangelo & Olinghouse, 2007; Santangelo, Harris & Graham, 2008; Troia & Graham, 2003). These two approaches will be discussed in turn below.

MA is the analysis of previously discussed variables that were conceived to positively affect the students' writing, i.e., analysis about analysis. It was conducted to examine the degree of writing gains based on the use of variables as instructional tools. All things considered, MA (and especially its resulting size effects) are believed to 'provide a more exact measure of the magnitude of the effects than the mere direction of the results' (Bangert-Drowns, 1993, p. 77), and thus it has 'the power to transform the students' writing skills' (Graham & Perin, 2007a, p. 446). Hundreds of empirical studies were reviewed to calculate effect sizes and, thus, to identify best instructional practices that can be integrated into mainstream teaching to improve the composing skills of struggling students.

Initiated around the mid-1980s, SRSD has been empirically proved to be a most effective tool not only for enhancing composing skills of struggling student writers but also for providing writing teachers with opportunities to improve their instructional practices (Graham, 2011; Harris et al., 2002a; 2002b; 2012; 2003; Harris & Graham, 2016; Santangelo et al., 2008). It draws on the writing habits of professional authors and skilled writers who invest considerable time and effort on many self-regulating strategies, i.e., planning, revising, organizing and evaluating, so that they can 'manage their writing behaviour, composing task and writing environment' (Graham, Harris & Troia, 1998, p. 20). SRSD primarily aims at assisting students with writing problems to develop their cognitive, behavioural and affective characteristics in such a way to produce enhanced writing quality, to take a positive attitude towards writing and to become sensitive to the audience, among others.

Contrary to the SRSD comprehensive approach to the writing challenges, Hyland (2000, p. 34) argues that since 'traditional student/teacher relationships are unequal in terms of the distribution of power', teachers' feedback does not improve the students' composing skills, and at best, it results in texts that 'reflect the teachers' preoccupations'. Implicit in this view is the assumption that writing takes place in a threatening environment where students write to please their teachers. However, this view can be refuted on three grounds. First, teachers' feedback occurs as a part of a more comprehensive plan that targets struggling students' cognitive, behavioural and affective characteristics in the manner detailed earlier so that they can 'brainstorm and organise ideas, generate substantive content, and edit and revise their work' (Santangelo & Olinghouse, 2009, p. 78). Second, teachers' feedback does not imply that students should individually take responsibility for incorporating it into their texts. Writing Researchers assert that teacher feedback can be discussed in teacher/student conferences and student/student collaborative writing sessions (Graham, Harris &

Larsen, 2001; Kraanyenood, Miller, Moni & Jobling, 2009; Martinez, Kock & Cass, 2001; Santangelo & Olinghouse, 2009; Troia & Graham, 2003). In this connection, Martinez et al. (2011) point out that writing instructors can enhance their relationship with struggling students by encouraging them to attend office hours where they can discuss writing challenges caused by feedback on the students' papers. Therefore, Hyland's isolationist view cannot stand as a valid criticism for teachers' feedback since it ignores the comprehensive nature of the instructional practices that embody it. Third, viewing students' writing as a reflection of the teachers' preoccupations ignores the extensive effort made by researchers and teachers 'to make writing motivating by setting exciting mood, creating a risk-free environment' so that students not only modify assignments prescribed by teachers but also select their own writing topics (Troia & Graham, 2003, p. 79).

3. Method

3.1. Participants

The study participants were Saudi male fourth-level (second year) students enrolled for the same short essay course at CC (experimental group) and CE (control group). The absolute majority of the participants were of the same age group, i.e., 19 years old, except for those who failed the course exam in the previous year(s) and, thus, had to retake it. Most participants came from the central regions of Saudi Arabia. Even those who were from the eastern and western regions belonged to the same social institutions as their peers inhabiting the centre of the country. The participants had attended the same pre-college educational system; however, they were observed to demonstrate varying levels of English proficiency. Thirteen students from each college optionally participated in the experiment which lasted for 12 weeks (from week 2 to week 14 of the second term). They particularly participated in the pilot study and produced multiple drafts of the extended descriptive paragraph that ultimately served as the study test topic. Despite the similarity in the educational, social, age and gender characteristics of the participants, the control group was generally conceived to be academically superior to the experimental group as reported in Table 1. In fact, experimental participants were challenged to the same English syllabus at CC so that they either excel to qualify for transfer to CE to graduate with a bachelor of education in English or to have their dreams to access college education shattered.

3.2. Instruments

A proficiency test was used to collect data for the study. It was administered to both groups in week 13. Also, the experimental participants were also interviewed to collect quantitative data in week 14. All participants were required to write an extended descriptive paragraph about a place they had visited. It could be a hometown, the nation's capital city, a mall or a tourist attraction. As anticipated, they wrote about their hometowns with Riyadh, Hafr Al-Batin, Majma'ah and Kuwait City to be the most recurrent writing themes. In fact, the participants described places that were not only familiar to them, but also because these were writing topics they attempted during the early weeks of the term as a course routine assignment. As a rule, the experimental group was advised to consider descriptive writing rubrics that they had been explicitly trained to use. Because the test was selected from Unit 2 of Savage and Mayer (2005, p. 36), eight rubrics pertaining to descriptive paragraph writing were identified after a careful review of the Unit. They were, then, refereed by independent judges to ensure that all the items targeted by the unit were included. Finally, the rubrics were posted on the LMS for the experimental group to integrate into their attempts to draft texts; the rubrics were: the topic sentence, supporting sentences, concluding sentence, grammar, unity, organisation, vocabulary and mechanics. It is important to note these writing rubrics were presented in two types of focus in the textbook: *language focus* and *rhetorical focus*. As such, they were accessible to both groups. However, listing and posting the rubrics online for use in self-revision was expected to give a definite advantage to the experimental group over the control group.

3.3. Procedure

For 12 weeks, most of the intervention activities took place online on the University LMS. Figure 1 shows all the electronic tools employed to communicate with the students when they were off-campus. Recurrently used tools were:

- i. Discussion: the class used this tool to brainstorm ideas for writing, share writing strategies, exchange information about technical issues relating to online submission of drafts and any other course information.
- ii. Dropbox: this tool was used to submit assignments; it would expire on the submission deadline; however, deadlines could be extended if requested by participants.
- iii. Online Rooms: participants frequently signed up for additional online classes often conducted in evening times.
- iv. News; this tool was used to update the participants on the tasks, submission deadlines, mid-term exams and many other course activities.



Figure 1. Electronic tools

4. Data analysis

Data were analysed using t-test of two-sample Assuming Equal Variances. The decision to use this test was confirmed by F-statistic for measuring the homogeneity of variances, resulting in a p -value > 0.05 , thus allowing samples' variances to be treated as equal as shown in Table 3:

Table 3. F-test two-sample for variances

	Variable 1	Variable 2
Mean	75.61538	63.15385
Variance	183.2564	135.4744
Observations	13	13
DF	12	12
F	1.352702	
P(F<=f) one-tail	0.304488	
F Critical one-tail	2.686637	

In this table: $\alpha \leq 0.05$; DF = degree of freedom; P = p -value

5. Results

5.1. Quantitative data

Table 4 presents the study results pertaining to the first research questions, i.e., whether or not instructional interventional is effective in enhancing the participants' performance.

Table 4. T-test: two-sample assuming equal variances

	Variable 1	Variable 2
Mean	75.61538	63.15385
Variance	183.2564	135.4744
Observations	13	13
Pooled Variance	159.3654	

Hypothesised Mean Difference	0
DF	24
t Stat	2.516699
P(T<=t) one-tail	0.009468
t Critical one-tail	1.710882
P(T<=t) two-tail	0.018936
t Critical two-tail	2.063899

$\alpha \leq 0.05$; DF = Degree of Freedom; P = *p*-value

As Table 4 shows, *p*-value (0.01) is less than the alpha level (0.05), thus indicating a significant difference in the participants’ performance in favour of the experimental group. A detailed discussion of this finding will be given in Table 6.

5.2. Qualitative data (interview)

A post-course interview was conducted to elicit qualitative data to evaluate the experimental group’s perception of the electronic version of the course. Table 3 shows responses of five participants to three interview questions, focusing on the participants’ D2L experience, possibility to enrol in other online courses, and their recommendation to improve the system.

Table 5. Interview result

Participants	Interview Questions		
	Q 1	Q 2	Q 3
1	D2L was simple and easy to use. Also Writing on D2L is easier than handwriting.	I will never hesitate to study another course on D2L.	I propose that all mid-term and final exams are conducted on D2L.
2	It helped us to break the traditional routine particularly in preparation and submission of assignments.	I will consider attending another online course as it would help me to study while I’m at home.	I recommend that the Deanship develops the system so that all course activities can be done online.
3	It helped me to improve spelling and sentence structure.	Yes. I will sign up for another online course. I acquired a number of technical skills that I can use in new courses.	I propose that instructors add videos to the system to be part of the course activities
4	It helped us to generate ideas for writing.	Yes, I will always sign up for courses on D2L because it facilitates communication with the instructor and submission of assignment.	Because the system does not function all the time, I propose that instructors allow submission of assignments as hard copies.
5	Using D2L in the writing course is useful and enjoyable. It made the class more motivating.	Sure, I will choose to study more English courses on D2L; however, I prefer traditional classes to study other subjects.	I propose that online instruction should not exceed about 25% of the course activities.

6. Discussion

Against general expectations, Table 2 shows that the experimental group (significantly) outperformed the control group. Writing research/theories, i.e., MA and SRSD, that provided the conceptual background of the study can reliably interpret this finding.

To begin with, MA of experimental research summarised in Table 2 reveals that technology was an effective tool for teaching writing. Thus, given the fact that it was vastly used to teach the course ENG221, it will be legitimate to ask about the affordances provided by LMS to enable the experimental group to achieve better results than the control group. Generally, LMS was employed both synchronically and asynchronously to keep the participants in the experimental group busy with the course activities. Fortunately, it had a mobile phone version that participants could use at the college, home, youth clubs and malls, among others. It was reported in the procedure section that D2L had several tools that were available for both online communication and instruction. This part of the discussion will attempt a detailed explanation of four e-tools conceived to be primarily responsible for the performance of the experimental group. These were the Discussion, Dropbox, Online Classes and Rubrics-Based Assessment.

The discussion tool played a central role in producing ideas that the participants needed for writing. Initially, they were reluctant to post and comment on topics in English, but with encouragement and permission that they could make bilingual contributions, they gained more confidence to give rich input. Discussions mainly centred upon ideas relevant to the writing topics, words in common usage, grammatical structures, writing rubrics and online submission of assignments; apparently, this tool exceeded its original mission, i.e., to brainstorm ideas for writing, to become a rich avenue of academic communication.

Upon the participants' request, about four classes were given online at evening times. Requests were often made either by participants who missed traditional classes or those who wanted to reinforce their understanding of the course content. Classes were conducted through videoconferencing where hands-on activities on participants' screens were shared to ensure that they had sufficiently understood and practised the tasks.

Dropbox was another important tool for academic communication between the participants and the instructor. It was the place where the participants could upload office documents that they had already composed on the PC. Because dropboxes were established with rigid deadline restrictions, some students usually resorted to the system's internal e-mail service as an alternative tool to attach their assignments. The Deanship for e-learning was requested to consider developing or even replacing the dropbox with a wiki where both individual and collaborative drafts could be produced. An important characteristic of the wiki is that it could be used both synchronically and asynchronously to produce, add, modify, edit and share content (Allwardt, 2013; Hadjerrouit, 2011; Liu, Jiao & Chen, 2016).

Subsumed under '*edit course*' (see Fig. 1), assessment rubrics played the most central role in enhancing the participants' composing competence. List of assessment rubrics related to the specific writing topics was posted on the system so that participants could individually and collectively use at different drafting and revising stages. They were particularly advised to conduct a rubrics-based peer review before submitting drafts for assessment. This process facilitated assessment in a way that participants could readily understand and accept; thus, acquitting instructors of stereotypical accusations of injustice.

It also encouraged participants to optionally produce more enhanced drafts as the only way to obtain better scores. One of the participants made three attempts to earn the total mark assigned to the extended descriptive paragraph. Initially, he believed that the attempt to integrate information emanating from the instructor's comment into the existing draft would qualify it for the full score, but he was advised that only error-free drafts could be so assessed. He then produced a third draft that was coherent and structurally and mechanically correct. The use of 'track change' features to assess the participants' work remarkably benefited them to make changes where they were required.

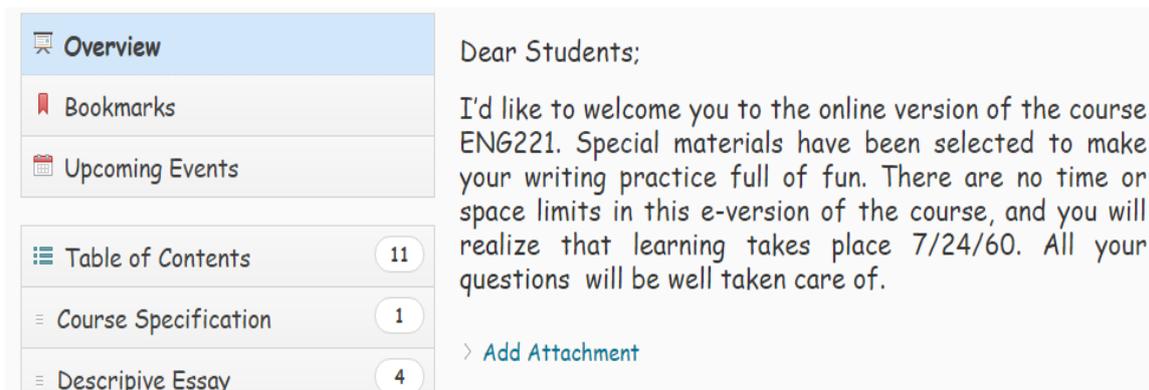
The effect of a technology-based instructional intervention on the performance of the participants in this study is consistent with the findings of many previous studies conducted in the Saudi context. For instance, Algraini (2014) studied the effect of Padlet on the writing of EFL students at Imam

University in Riyadh. In this study, the experimental group received training in the use of Padlet in writing while the control group was trained through traditional instruction. The analysis of post-test results indicated a significant difference between the mean scores of the two groups in favour of the experimental group. A second intervention was Ahmed (2016), which attempted to measure the effect of flip teaching on the writing of EFL students at Gassim University. Writing test results showed that flip teaching significantly enhanced the performance of the experimental group. Third, Kassem (2017) investigated the use of wikis to develop EFL learners' business writing skills at Prince Sattam University. A standardised writing test was used to compare the performance of the experimental and control group. The result revealed statistically significant differences in favour of the experimental group. Another wikis-based study was Alshumaimeri (2011). It aimed at improving the writing skills of the Preparatory Year students at King Saud University. Participants were divided into experimental and control groups and were trained accordingly. The analysis of the results revealed that the experimental group significantly outperformed the control group in both the accuracy and quality of writing.

The abundance of technology-based interventionist research conducted in the Saudi context reflects a heightened significance educational authorities attach to e-learning as evidenced by relative reliance on the Saudi digital library, institutional websites, faculty web-pages and learning management systems, among others. Despite all these affordances, e-learning still occupies small space in most activities in traditional institutions. It was once circulated at MU that faculty should assign 10% of course activities and assessment to e-learning. It is hoped, therefore, that these research findings would encourage authorities to deliver more courses online.

Because the participants could easily integrate materials from other sources into their texts, advocates of traditional education might argue that e-learning would possibly encourage plagiarism among them, which in turn would cast doubt on whether they had genuinely achieved test results as reported in Table 4. However, this argument could be rejected on three grounds. First, it was stipulated that first drafts should always be produced in the traditional classroom, and that the students could subsequently modify these drafts electronically in the light of the instructor's comments which were made through the Microsoft track change feature. Second, in the rare cases of doubt, if the participants had produced certain submissions, they were often required to explain the meanings of unfamiliar words in their drafts. Because such inspection always occurred in the classroom, the resulting embarrassment deterred participants from future attempts to plagiarise materials. Third, evidence from qualitative data as reported in Table 5 substantiates the genuineness of the performance of the experimental group. The post-course interview demonstrated that the participants had positive attitudes towards course delivery on the LMS. They were particularly satisfied with the electronic preparation and submission of the assignment. Also, the collaborative nature of brainstorming to produce ideas from writing appealed to them. What is more, the second interview question indicated that the participants were highly motivated to enrol on more LMS courses in the future.

SRSB lent itself well to the intervention, particularly with regard to its objective to assist struggling writers not only to have positive attitudes towards writing but also to view themselves as good writers (Graham et al., 1998; Harris et al., 2003). In line with this premise, the present intervention was incorporated into mainstream teaching of the course ENG221 to improve the performance of the experimental group to be approximate or equal to the performance of the control group, and thus assists its members to redeem themselves in an academic environment where they were usually stigmatised as underachievers, if not academic failures. A number of motivating strategies were used to persuade the participants that they could produce enhanced drafts. For instance, the following message was posted on the opening page of the course, welcoming them to a user-friendly repository that would facilitate their drafting attempts.



Overview	
Bookmarks	
Upcoming Events	
Table of Contents	11
Course Specification	1
Descriptive Essay	4

Dear Students;

I'd like to welcome you to the online version of the course ENG221. Special materials have been selected to make your writing practice full of fun. There are no time or space limits in this e-version of the course, and you will realize that learning takes place 7/24/60. All your questions will be well taken care of.

> Add Attachment

Figure 2. Course message

The message was sufficiently explained and illustrated to the participants in a traditional class before starting other activities.

Also, the participants were introduced to the scholarly achievements of three academics: Professor John Swales, Professor Ken Hyland and Professor Paul Matsuda. As to the first two, the participants were surprised to realise that they had initiated their intellectual work in the Middle East and North Africa. Professor Matsuda, on the other hand, was of Asian origin who hated English at the beginning of his college education, but has ultimately become a landmark in second language writing theory. Most participants excitedly voiced their ambition to become future successful researchers; one of the participants mentioned that he would be 'Paul Matsuda of Saudi Arabia'.

7. Conclusion

It was reported in the discussion section that the main purpose of this intervention was to enhance the participants' performance and their perception of themselves as good writers given the fact that they were generally conceived as 'struggling students'. The intensive and varied LMS-based course activities culminated in a statistically significant performance difference in favour of the experimental group. This finding could have far-reaching implications for instructional practices and thus provide new research horizons. First, it is apparent that (struggling) students could profoundly benefit from the instructional intervention to improve their composing skills despite the general institutional preconceptions that they could not. The study finding confirmed Kirby and Liner's (2013) contention that even struggling students could have language, thoughts and stories to share through writing. Second, it was reported that the participants always produced drafts on Microsoft office before uploading them onto the system. This process could be time-consuming, and as such, it might demotivate the students. A development of system-based wiki could significantly save the students' time, increase their written product and thus provide more productive research spaces.

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