EFFECT OF SHORT ENGLISH WRITING ACTIVITY ON FACEBOOK ON SCIENCE AND NON-SCIENCE STUDENTS' PERFORMANCE

Shaidatul Akma ADI KASUMA*[1]
Malini GANAPATHY[2]
Debbita Ai Lin TAN[3]
Mohamad Saifudin MOHAMAD SALEH[4]
Universiti Sains Malaysia, Malaysia
[1]shaidatul@usm.my
[2]malinik@usm.my
[3]debbita_tan@usm.my
[4]saifudinsaleh@usm.my

ABSTRACT

This study compares the science and non-science university students' performance in a short English writing activity on Facebook. In this mainly quantitative data, 86 Common European Framework of Reference (CEFR) Independent and Basic English users from 4 classes (2 sciences and 2 non-sciences), joined four separate Facebook Groups, managed by two class teachers. Each week, the teachers posted a pre-selected topic in the groups and the students were instructed to respond to it. The mean performance of the groups was compared by performing a paired samples t-test and an independent samples t-test of the pre-test and post-test. The post-test revealed a significant improvement in the students' short writing performance (within groups), but no significant difference was observed between the science and non-science groups' performance (between groups). Individual interviews with the teachers revealed that both groups of students committed similar grammatical, structural, and vocabulary mistakes but the Science students were more active and confident in using English in the classroom. In line with the constructivist view of language learning, the study highlights the importance of teachers' instructions, feedback, monitoring, and encouragement in improving students' short writing ability and consistency in writing practice.

Introduction

Social media and web tools are increasingly utilised in language teaching and learning practices. The tools used in English classrooms include Facebook, WhatsApp, Instagram, blogs, Kahoot, Canva, Edmodo, and podcasts (Mudra et al., 2022; Nugroho et al., 2022). These tools, along with the options that they offer, are viewed positively, making them an incentive for writing improvement (Lira-Gonzales et al., 2023). This is especially true for social media like Facebook and Instagram which students use daily to socialise and learn English (Mahmud et al., 2022).

Facebook is among the pioneers in social media platforms for English language learning and has been researched for more than a decade. Studies have shown the usefulness of Facebook on reading, writing, listening, and speaking skills (Barrot, 2018; Klimova & Plikhart, 2020). Facebook's pedagogical potential in language learning is due to its features such as groups, chats, synchronous and asynchronous interactions, support for videos, graphics and texts, flexibility, accessibility, exposure to social pressure, and audience awareness (Barrot, 2021).

Throughout the years, Facebook has maintained its relevance and strength as an educational and research platform (Mauludin & Rizal, 2023; Tran & Pham, 2023). A meta-analysis reported Facebook's roles and benefits for foreign language instruction by engaging adult learners, improving college students' academic performance and achievement, supporting cross-cultural awareness and collaborative learning, enhancing interactive and communicative learning, as well as immersing students in a meaningful learning experience (Qassrawi & Al Karasneh, 2023). All these make Facebook a suitable lifelong English learning platform for university learners.

Research on Facebook as an English writing platform has been extensive, but not exhaustive (Barrot, 2021). There is a limited amount of research that compare the usage of Facebook as a tool to develop English writing among students of different disciplines, for example, between science, arts, social science, and/or engineering. This is an important gap because inconsistent findings were observed when Science and non-Science students' performance was examined. For instance, Shousha et al. (2020) reported different writing difficulties faced by arts and science students. Despite this, Teaching English as a Foreign Language books produced for science and non-science students do not cater to these differences (To & Mahboob, 2017).

Considering the status of English as the medium of instruction (Alhassan, 2019), its importance in graduate employability in both the scientific and social sciences domains, and the popularity of social media as learning tools, this study examines whether Malaysian university students benefit from using Facebook to improve their English writing skills and whether there are differences between the science and non-science students' writing performance in Facebook writing tasks.

Literature Review

Use of Facebook in Improving English Language Writing Skills in ESL and EFL Contexts

Facebook offers a potential pedagogical feature that can be utilised to improve language skills (Samani & Noordin, 2019). Studies on English writing on Facebook have been examined from various angles (Barrot, 2018), including the impact of learning via Facebook and students' achievement (Klimova & Pikhart, 2020; Sakkir & Dollah, 2019), written corrective feedback (Alberth, 2019; Ekahitanond, 2018), e-portfolio (Barrot, 2021); motivation (Alberth, 2019); peer-based comments and interactions (Pham & Hoai, 2021; Samani & Noordin, 2019); and factors influence Facebook writing (Aziz & Khatimah, 2019).

An increasing number of studies have shown that Facebook and Instagram use can develop the technical aspects of ESL and EFL writing skills, such as structuring and organising ideas and lexical collocation errors, which are caused by students' direct translation from the native to the second language (Lamo et al., 2023; Rakhmatovna, 2023). Sultana et al. (2023) and Atayeva et al. (2019) suggested that online newspaper reading with more visual components can help with these issues and increase students' confidence to publish their works on Facebook.

Facebook is useful for developing productive language skills, especially writing, which is the least popular and most difficult skill to master (Klimova & Pikhart, 2020). Through reviews of Web of Science and Scopus databases for Facebook and writing-related studies, Klimova and Pikhart (2020) attested to Facebook's potential in developing writing skills. Similarly, Un Nisa et al. (2023), Paida et al. (2022), and Sakkir and Dollah (2019) among others reported significant improvements in Pakistani and Indonesian students' English writing scores (e.g., descriptive), hence, called for the application of Facebook group for English writing activity.

The Facebook Group feature has been identified as the most suitable for English writing activity (Amirza, 2019; Aziz & Khatimah, 2019; Sakkir & Dollah, 2019). The participants in Amirza's (2019) study found Facebook Group helpful for choosing correct vocabulary, brainstorming ideas, and writing in Standard English and grammar, though the process was challenging for them. In Facebook Groups, the students were exposed to peer comments and writing, which helped the learners improve their skills as well as their affective domain (Amirza, 2019; Pham & Hoai, 2021). Added to this, Facebook Messenger has been found to accommodate meaningful interactions via online chat, discussions, and completion of grammatical tasks.

The synchronous and asynchronous feature of Facebook allows timely feedback to prevent students from repeating the same errors and storage of feedback for later access (Samani & Noordin, 2019). Cruz (2023) recommended the Facebook Project to promote tandem learning that encourages interactions among peers. The learning experience during the COVID-19 pandemic establishes that Facebook adoption has a significant positive relationship with usefulness and ease of use, accessibility, and productivity while improving academic performance (Bouklikha, 2023). Despite acknowledging the adverse effect of Facebook on students' English

writing performance, Asafo-Adjei et al. (2023) still recommended integrating pedagogical practices that leverage social media to engage students.

As findings on Facebook's potential in English writing are still of interest, this study follows Klimova and Pikhart's (2020) suggestion on the need for more experimental research in this area to examine other skills such as communicative competence, that may also benefit students.

Interaction between Teachers, Peers, and Tools on Social Media Writing

Technology as the main source of tools in social constructivist classrooms enhances the collaborative and communication process among teachers, students, and peers. A meta-synthesis of studies shows that technology-supported peer feedback activities will be successful when all these elements are taken into consideration including students' preferences, capabilities, and attitudes towards the features of digital tools, contextual factors, online platforms and their usage, and provision of proper feedback (Qassrawi & Al Karasneh, 2023). For example, peer writing feedback on Moodle (Learning Management System, LMS) and Facebook both significantly improved students' abilities, and the e-peer feedback on Facebook had a considerable impact on the length of writing and involved more diverse comments, compared to Moodle (Tran & Pham, 2023). Hence, student-centred and communicative approaches in English language learning indeed maximise participation and foster active engagement, deeper understanding, collaboration, critical thinking, and creativity among students (Shafi & Masood, 2023).

While peer interaction gives students a sense of community in a learning environment, a strong teacher's presence, facilitation, or moderation as the More Knowledgeable Other is important in social constructivism and social media learning. Students prefer teachers' presence in an online learning community as they require guidance and feedback during learning (Suppiah et al., 2022). Added to this, teachers' involvement in peer feedback activities was beneficial in improving the consistency of the comments and revisions (Astrid et al., 2021). Therefore, teachers must plan and execute teaching and learning activities effectively. Students' ability to self-regulate and learn effectively with peers are indicators of success in the present day (Lim et al., 2020). Nazir and Brouwer (2019) attested that in a science programme, the "student-community" Community of Inquiry formed on Facebook led to a powerful educational experience when the activities were constructively integrated into the course design, with the presence of a moderator.

Science and Non-Science Students' English Language Learning

Studies comparing science and non-science students' English language performance and achievement are limited. Shousha et al. (2020) reported from the Saudi perspective that Arts students faced difficulties in writing mechanics (spelling, syntax, and sentence structures); while science students had more semantic writing problems and inept vocabulary that resulted in lexical errors. Similarly, the female Arab undergraduate students at Science and Arts College made grammar, spelling, and punctuation mistakes in their English writing (Dhanapal & Agab, 2023) and the English

majors in Maznun et al. (2017) faced difficulties in writing the introduction for research reports, particularly in constructing the background of the study, theoretical framework, and statement of the problem. These issues arose from the lack of exposure to the English language, inadequate application of primary language and writing mechanics, memorisation of writing topics, and interference and direct translation from the native language.

Ardasheva et al. (2018) opined that science is a linguistically and cognitively demanding topic. Hence, comprehending the factors that contribute to vocabulary learning is important to help English learners study the subject (Dhuli et al., 2023). Moore and Schleppegrell (2020) stated that engagement in reading and writing in science with a focus on language enabled upper elementary Arabic EFL learners to be more; expressive, critical in their presentation of evidence, confident in their assertions, and argumentative. Rakedzon and Baram-Tsabari (2017) believed that future scientists must successfully communicate science to integrate into the community via writing, publish scientific papers in English, as well as engage with various stakeholders.

To this end, Blikstad-Balas et al. (2018) stressed language art teachers' role in scaffolding students' writing ability. When writing is prioritised, learners are given the opportunities to be immersed in sustained, scaffolded sessions, in producing explicit, genre-specific products. Cervetti and Hiebert (2019) affirmed that knowledge has not always been a focus of English/Language Arts Instructions, as students' schemata are not activated in acquisition. They underlined several strategies to overcome this problem including giving students reasons to read and write, as well as prioritizing content-area instruction. Poonpon (2017) advocated for interdisciplinary-based projects to be implemented in language classrooms to enhance Information Science learners' English acquisition, substantiating Victoria's (2023) encouragement for more hands-on experiences, project work and activity-based teaching to nurture the scientific attitudes among students in improving education. Lira-Gonzales et al. (2023) recommended the utilisation of digital technologies that involve both technical and social elements like blogs, Twitter, and Instagram to improve students' writing experience; and Bailey and Lee (2020) found that writing on social media yielded the greatest clarity due to shorter sentence length and simpler word choice than textbook-based and test-based writing. Many studies have examined scientific communication via the English language and provided evidence of Facebook's values on science students' academic achievement (Basil, 2023; Moore & Schleppegrell, 2020).

This study fills the gap between the science and non-science students by examining their English short-writing performance in the realm of social media learning.

Methodology

Participants

The participants of this study were 86 university students, made up of 37 science and 49 non-science students, and enrolled in a Level 1 English proficiency course. They

were identified based on their achievement in the MUET, a requirement for university entrance.

Aligned to the Common European Framework of Reference (CEFR), the MUET comprises nine levels (Bands 1.0 to 9.0). Ninety-seven percent (97%) of the science and 71% of the non-science students were Lower B1 Users (MUET Band 3.0), categorised as Independent Users. The rest of the science (3%) and non-science participants (29%) were Basic Users (MUET Bands 2.0 and 2.5). There was a higher percentage of the science participants with Band 3 (97%) compared to the non-science group (71%).

The science group was a mixture of Year 1 and Year 2 students, while the non-science students were almost exclusively Year 1 students. The participants enrolled in 4 classes: two sciences and two non-sciences, handled by two teachers with 10 years of teaching experience. The teachers handled one science and one non-science class each. The participants were a mixture of sciences and non-sciences programmes including Chemistry, Biology, Industrial Technology, Arts, Management, and Social Sciences.

Research Instruments

This study has three main instruments, which are (1) pre-test and post-test, (2) weekly Facebook short English writing activity, and (3) individual interview sessions with teachers.

The weekly writing topics were decided based on the syllabus of the course, the student's proficiency level, and the required writing skills. Teacher A, Teacher B, Teacher C, and the researchers proposed, discussed, and vetted the writing topics in three discussion sessions. Teacher C was an external panel with seven years of teaching experience at the department and was involved in the selection of the topics as well as grading of the weekly short writing. The selected topics (listed in Table 1 in the results section) were considered useful, practical, and relatable for students' reflections.

The interview questions were created based on the needs of the study. The questions were about the students' participatory pattern in the writing activity and writing ability in terms of content, language, and organisation. The teachers were asked to compare the Science and non-Science students' short writing performance, attitude in the classrooms, and participation in the Facebook activities.

Data Collection Procedure

The short English writing activity on Facebook was conducted for eight weeks (Week 3-8), inclusive of two weeks of pre-test (Week 2) and post-test (Week 9).

Four Facebook groups were created to cater to the four classes. The Facebook groups were named Teacher A (Science Group), Teacher A (non-Science Group), Teacher B (Science Group), and Teacher B (non-Science Group). The students enrolled in the teachers' classes were invited to join the group as part of the class activity.

The intervention started on Week 2 of the semester when all participants took the pre-test. The students were required to produce a short English writing (5-7

sentences) in response to a given topic on Facebook. This took place for 30 minutes during class hours. The post-test in Week 9 followed the same format as the pre-test.

Weeks 3-8 were allocated for similar exercises. Every week, the teacher posted the selected topic in the Facebook groups and students were required to respond to the topic within a week. Throughout the week, the teachers monitored their students' responses and provided feedback using the comment feature. Students were encouraged to read and comment on each other's posts to promote English language usage and establish a friendly environment.

Each writing piece produced by the students in the pre-test, weekly writing exercises, and post-test was graded by Teachers A, B, and C and scores were recorded in four separate Excel templates.

After the writing intervention concluded, the teachers participated in individual interview sessions with the researcher.

Data Analysis

Each piece of short writing on Facebook was graded by two teachers, that is, Teachers A and C, and Teachers B and C, based on an adapted writing rubric used by the English Department at the university. To ensure reliability, the components of the marking scheme were fixed to content development (details and elaboration), lexical variety, and grammatical accuracy. The total score of each writing piece was 12 marks, with the following categories – Limited User (4-5 marks), Modest User (6-8 marks), Good User (9-10 marks) and Very Good User (11-12 marks). The scores were reported to the researcher to be tested for statistical significance.

The pre-test, post-test, and weekly students' writing were gathered and analysed quantitatively using descriptive and statistical analysis. The descriptive data included the frequencies, percentages, mean scores, and standard deviations. The statistical data comprised the normality test, paired samples t-test (within groups), and independent samples t-test (between groups).

The qualitative data from the three interviews were analysed deductively based on the questions and responses. Recurring themes are the science and non-science students' short writing performance as well as their attitudes and the psychological factors that affected their participation in the English lessons and activities.

<div align="center">

Results and Discussion

</div>

The research question (How do the Science and Non-Science students perform in the short English writing activity on Facebook?) is addressed quantitatively using descriptive statistics and paired and independent samples t-tests based on the student's scores in their short Facebook writing activity.

Scores for Writing

Table 1 shows the writing topic and the short writing scores in the form of mean and standard deviation. The analysis of ESL response writing among science and non-

science students shows consistent performance, with science students slightly outperforming across topics. Out of 10 marks, the performance of science students was consistently good, with scores ranging from 6.32 to 7.26 across weeks. Their performance was particularly strong in Weeks 7 to 9, showing steady improvement and higher engagement in the post-test (Week 9).

For non-science students, the performance was average, with scores ranging from 5.93 to 6.84. They showed moderate engagement throughout but demonstrated the most improvement in the post-test (Week 9), reflecting gradual skill development. Both groups showcased their highest engagement and performance in the final weeks of the study.
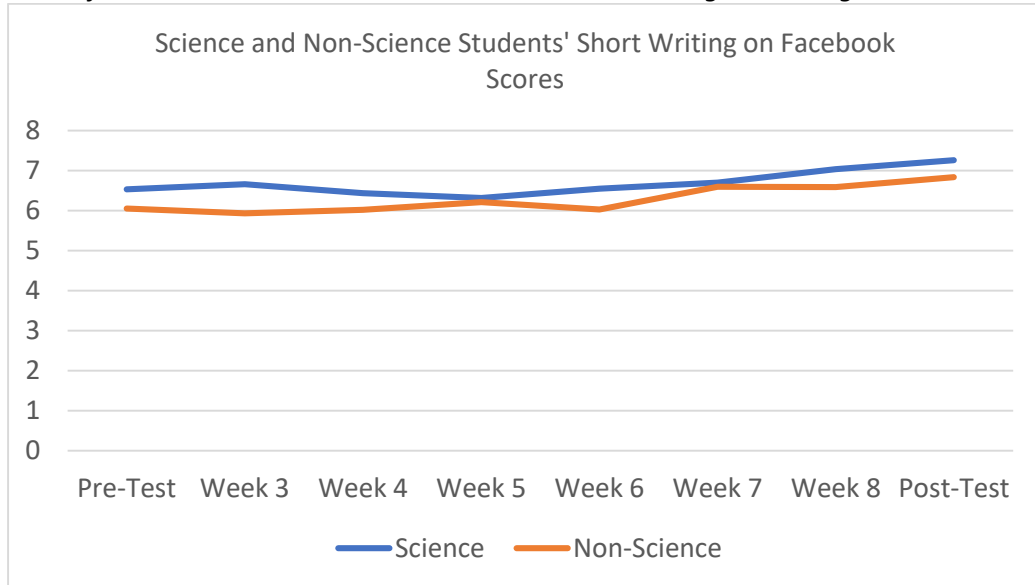
Table 1
Writing Topics and Scores from the Pre-Test, Post-Test, and Weekly ESL Writings

Week	Activity	ESL Response Writing Topic	Science (N=37)		Non-Science (N=49)	
			Mean	SD	*Mean*	SD
2	Pre-test	Do you prefer time or money? Why?	*6.53*	1.26	*6.05*	1.03
3	Exercise	Do you find it difficult to make friends? Why or why not?	*6.66*	1.09	*5.93*	0.93
4	Exercise	Write about a time when you felt pure joy.	*6.44*	0.94	*6.02*	0.98
5	Exercise	What is the most interesting thing about you?	*6.32*	0.92	*6.21*	1.18
6	Exercise	What is your greatest fear?	*6.55*	1.15	*6.03*	0.96
7	Exercise	Who is your celebrity crush? What do you find appealing about him/her?	*6.70*	1.01	*6.60*	1.12
8	Exercise	What is the most beautiful thing you have ever seen?	*7.04*	1.06	*6.59*	1.13
9	Post-test	If you could invent one thing to make your life easier, what would it be?	*7.26*	0.98	*6.84*	1.18

Figure 1 shows the comparison of the student's achievements. Figure 1 indicates that Science students' scores were better than the non-Science students in the short English writing activity on Facebook. The result is not unexpected as the science students were required to have a higher English language qualification to enrol into their respective programmes, compared to their non-science counterparts.

Figure 1
Scores from the Science and Non-Science Students' Short English Writings on Facebook

Science and Non-Science Students' Short Writing on Facebook Scores

Test of Normality

The test of normality was conducted to determine the distribution of scores. The sample size was 86 participants (50 < 86 < 2000, within the range of Shapiro-Wilk test), therefore, a Shapiro-Wilk normality test was conducted. Table 2 shows the test of normality results for both science and non-science participants. Table 2 shows that the p-values for the pre-tests and post-tests for both the Science and non-Science groups were .056, .245, .420, and .931 ($p > .05$) respectively, hence the distribution of the data was normal. Therefore, the parametric paired t-test is appropriate for further statistical analysis.

Table 2
Test of Normality

Activity	Discipline	Shapiro-Wilk		
		Statistic	df	Sig.
Pre-Test	Science	0.943	37	0.056
	Non-Science	0.970	49	0.245
Post-Test	Science	0.970	37	0.420
	Non-Science	0.989	49	0.931

Writing Scores Before and After the Facebook Writing

The parametric paired t-test was then carried out to assess the strength and direction of the relationship in the scores of the two groups. The paired samples test, paired samples statistics, and paired samples correlations between the science and non-science groups are shown in Table 3.

Table 3
Paired Samples Test

Activity	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Science: Pre-test & Post-test	-0.730	1.056	0.174	-1.082	-0.378	-4.202	36	0.000
Non-Science: Pre-test & Post-test	-0.791	1.045	0.149	-1.091	-0.491	-5.297	48	0.000

Table 4 shows students' writing improvement (mean scores) after 8 weeks of the writing activity. Based on the result of the paired samples test in Table 4, the sig. (2-tailed) value for both Science and non-Science groups were 0.000 ($p < 0.005$). Therefore, the null hypothesis is rejected. There were significant differences in both groups' mean writing scores before and after the Facebook writing intervention, indicating that the Facebook writing intervention significantly improved the writing performance of both science and non-science students over the eight-week period.

Table 4
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-Test	6.5270	37	1.25663	0.20659
(Science)	Post-Test	7.2568	37	0.97626	0.16050
Pair 2	Pre-Test	6.0459	49	1.03036	0.14719
(Non-Science)	Post-Test	6.8367	49	1.17765	0.16824

Table 5 shows significant positive relationships between the writing scores before and after the Facebook intervention for both groups of students (science, r=0.577, p=0.00; non-science, r=0.559, p=0.00). A paired sample t-test was performed comparing the writing scores before and after (pre-test and post-test) the adoption of short ESL writing activity on Facebook between the science and non-science groups. The result for both groups showed that the mean differences were negative (science, M=-0.730, SD=1.056; non-science, M=-0.791, SD=1.045). This indicates that there were significant differences, science t(36) = -4.202, p < 0.005; non-Science t(48) = -5.297, p < 0.005, between students' writing performances before and after engaging with the Facebook writing activity. In conclusion, the short English writing activity on

Facebook improved the Science and non-Science students' English writing abilities and can be made into a valuable practice inside and outside of the classrooms.

Table 5
Paired Samples Correlations

Activity	N	Correlation	Sig.
Science: Pre-test & Post-test	37	0.577	.000
Non-Science: Pre-test & Post-test	49	0.559	.000

Differences in Writing Scores Between the Science and Non-Science Groups

The independent samples t-test was conducted to determine significant differences between the two groups. Table 6 shows the results of the independent samples t-test.

Table 6
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Pre	Equal variances assumed	0.1	0.8	1.95	84	0.055	0.48	0.25	-0.1	1.0
	Equal variances not assumed			1.90	68.6	0.062	0.48	0.25	-0.0	1.0
Post	Equal variances assumed	2.1	0.2	1.76	84	0.082	0.42	0.24	-0.1	0.9
	Equal variances not assumed			1.8	83.2	0.074	0.42	0.23	-0.0	0.9

The p-values under Levene's Test for pre-test is, p = 0.0791 > 0.05, and post-test is, p = 0.154 > 0.05, therefore equal variances are assumed. The Sig. (2-tailed) for the pre-test is p = 0.055 > 0.05, and for the post-test, p = 0.082 > 0.05, therefore, the null hypothesis is accepted. There is no significant difference in the short ESL writing ability between the Science and Non-Science groups after the Facebook intervention.

An independent t-test was performed to compare the mean scores between the science and non-science groups. The result revealed no significant difference between the mean writing scores of the science group and the non-science group

(Pre-Test, t(84)=1.950, p > 0.05; Post-Test, t(84)=1.806, p > 0.05), hence, the null hypothesis is accepted.

In conclusion, the results of the statistical tests showed that there were significant improvements in the science and non-science students' writing performances before and after their engagements with the short English writing activity on Facebook (within groups). However, when compared between groups, the science and non-science students' performance was not significantly different, indicating that they developed their writing skills at the same pace. This suggests that the Facebook short writing activity is beneficial to be practised across disciplines for ESL students.

Teachers' Interview

Three experienced teachers were involved in the process of conducting, teaching, and grading the students' short ESL writings on Facebook.

Based on their experience, they concurred that the science and non-science students did not differ too greatly from each other in their writing ability and committed rather similar errors. In terms of content, they have ideas to write, but limited vocabulary sometimes prevented them from effectively making their points. Neither group seemed to have many issues in organising their ideas, as shown by the interview extracts from the three teachers.

> Teacher A: I wouldn't say there isn't any difference, but not too obvious. All the students are almost the same, but the science students are already with better English.
> Teacher C: The good ones are okay; they can write well. The weak ones or the average can write too but must acquire more vocabulary to make their writing better.

The teachers were also asked to explain both groups' attitudes when they engaged in writing activities or tasks. From their observation, the students were positive when given writing tasks, but Teachers B and C added that writing activities and tasks are tough. While the students accepted the assignment, they may not feel confident with their writing skills, and therefore did not like it so much.

> Teacher B: Both groups showed a positive attitude during writing activities and in the classrooms.
> Teacher C: The students I met are okay. I do feel that sometimes they hesitated when I gave them writing tasks. Maybe they are not confident to write because I always pointed out the mistakes in their drafts.

An interesting observation was pointed out by Teacher C when the participation patterns across the four classes were compared.

> Teacher C: What I noticed when grading was that, you can see this from the score tables, the students in Teacher's A classes were more consistent. Almost

everyone posted every week. But in Teacher's B class, their writings are sometimes missing.

Teacher C noted that there was a difference in terms of the consistency of task completion when the classes were compared. This situation perhaps relates to the teachers' monitoring and encouragement of students' participation in the group. Teachers A and B may have different teaching and facilitating styles in the classrooms.

Finally, the teachers were asked to describe the differences they observed among the science and non-science students' outlooks towards English language learning. All three teachers agreed that the non-science students were quieter than their science counterparts, which they attributed to the former's lower level of proficiency. The science students have a higher English language qualification (Independent level) to enrol in their respective study programmes, while the non-science students only require Basic English ability. Despite this difference, the teachers agree that both the science and non-science students gave their best efforts to participate in class activities.

> Teacher B: There are times when the science group of students performed better than the non-science group. However, there are also many non-science students who did well in writing.
> Teacher C: The science groups always seem more ready to participate. The non-science groups participate too, but not too actively. Maybe they are not confident, but they do produce the outcome.

Both groups of students demonstrated positive attitudes during writing activities in the ESL classrooms, although the science groups usually demonstrated better performance than the non-science groups. In essence, there were better and weaker students in both groups and writing performance often depended on individual students' proficiency level.
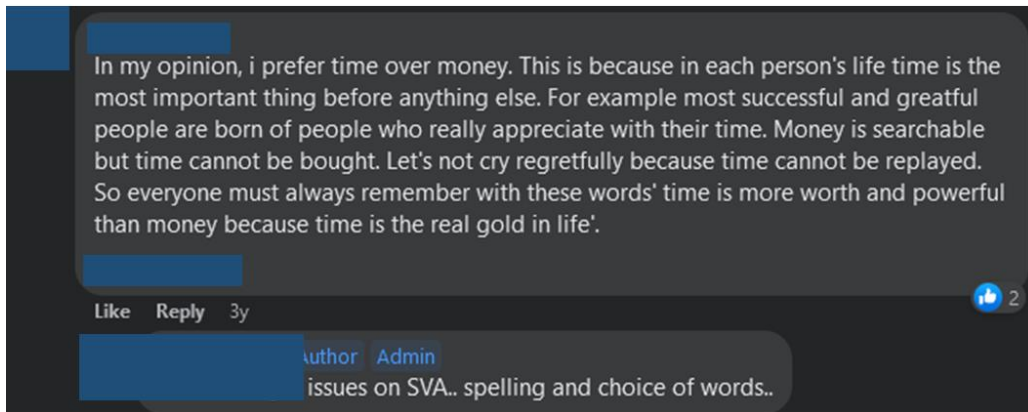
In summary, the interview responses revealed that there were differences in terms of performance, attitudes, participation, and confidence between the science and non-science students in the short writing activity on Facebook. Teachers should consider these factors while integrating such technologies in English learning to maximise students' experience and attainment of necessary skills for future use.

Extracts of the Short English Writings on Facebook

The following are extracts from the writing activity on Facebook from both groups. Students from both groups made similar mistakes with the common ones being subject-verb agreement, tenses, and articles, as well as inaccurate choices of words and sentence structures. Both Teachers A and B provided direct feedback to correct the mistakes. Figure 2 shows a sample writing extract in one of the Facebook groups.

Figure 2
Short writing by Science student 1 from Teacher A's class on the topic of 'Do you prefer time or money? Why?' in Week 2

In my opinion, i prefer time over money. This is because in each person's life time is the most important thing before anything else. For example most successful and greatful people are born of people who really appreciate with their time. Money is searchable but time cannot be bought. Let's not cry regretfully because time cannot be replayed. So everyone must always remember with these words' time is more worth and powerful than money because time is the real gold in life'.

Like   Reply   3y

uthor   Admin
issues on SVA.. spelling and choice of words..

Discussion

The ESL short writing activity on Facebook can improve students' writing skills, perhaps, due to the frequency of the activity, the relatable topics, and the feedback from the teachers. The short writing activity provided students with a quick exercise to enhance their English language usage. Aziz and Khatimah (2019) agreed that the duration of time given to students to complete their activities affects their performance. In this case, a week was sufficient for the students to complete the short writing task on relatable topics. The asynchronous nature of the activity further provided students with more time to read, reflect, and write their comments (Astrid et al., 2021).

The current findings suggested that language proficiency exercises should encompass a wide range of topics and contents. Biological science students in Indonesia have been shown to request universal writing lessons including note taking, (critical) essays, informal text (e.g., email and short writing on social media), curriculum vitae, summary, abstract, experience, presentation slides, business letter, and research article instead of field-specific scientific reports (Rahmatullah et al., 2023). Therefore, universal task themes can be given to both science and non-science groups to develop their writing mastery. Recommendations by Victoria (2003), Cervetti and Hiebert (2019), and Poonpon (2017) for interdisciplinary-based projects and content-area instructions in language classrooms are also beneficial to give students purposes and goals to read and write in the target language.

The teachers agreed that the science students were more active than their non-science counterparts in the classrooms and on the Facebook platform. The science students always seemed ready to participate in lessons, while the non-science students required more prompts and encouragement. They agreed that this was due to the science students' higher proficiency level, which made them more comfortable and confident in articulating their thoughts during lessons and activities as well as in putting in more effort to produce quality writing. Rianto (2020) substantiated that science students with high English proficiency preferred communicative activities like asking questions and collaboration (social), while those with lower ability preferred techniques that organise, focus, and evaluate their learning (metacognitive).

Even though the non-science students seemed quieter, they completed the given tasks. Perhaps, the feeling of awkwardness when communicating with friends

on Facebook limited their participation (Astrid et al., 2021). Therefore, while the writing tasks may suit both groups, the non-science students may benefit from more active and interactive learning activities, which can improve their confidence level in using the English language. For example, Cruz (2023) used the Facebook Project to create tandem learning which has proven helpful in enhancing students' intrinsic motivation, promoting learner reflection, and engaging with their partner's language needs.

Conclusion

The study showed that the short English writing activity on Facebook can be beneficial in improving university students' performance across disciplines. The findings also revealed that both science and non-science students committed similar types of grammatical, structural, and vocabulary errors in their writing. While there was no significant difference between groups' performance, the teachers observed different participation patterns among the science and non-science students, which were attributed to confidence and proficiency levels.

Therefore, Facebook may be considered as an alternative space for English writing practices across disciplines. The frequency of the writing activity and teachers' active guidance and monitoring are contributing factors to students' improved writing ability. Further research in the area may venture into interdisciplinary projects and content-based instructions in improving English writing skills on Facebook.

The study is limited to a small number of participants and a short period of intervention. For more substantial findings, future studies could investigate students from specific sub-disciplines such as engineering, education, biology, or architecture to find out whether the results hold, and integrate the Facebook activities into a whole semester for a longer period of intervention.

Research Ethics

This study was conducted by the Jawatankuasa Etika Penyelidikan Manusia USM (JEPeM)/Human Research Ethics Committee USM (HREC) (JEPeM Code USM/JEPeM/18070290).

References

Aziz, A. Z., & Khatimah, H. (2019). Enjoying learning writing through Facebook group. *Lingua Cultura*, *13*(2), 115-121. https://doi.org/10.21512/lc.v13i1.5513

Alberth. (2019). Use of Facebook, students' intrinsic motivation to study writing, writing self-efficacy and writing performance. *Technology, Pedagogy and Education*, *28*(1), 21-36. https://doi.org/10.1080/1475939X.2018.1552892

Amirza, M. (2019). Writing recount text to senior high school students via FB group: What's on their mind? *English Education Journal*, *10*(3), 213-226.

Ardasheva, Y., Carbonneau, K. J., Roo, A. K., & Wang, Z. (2018). Relationships among prior learning, anxiety, self-efficacy, and science vocabulary learning of middle

school students with varied English language proficiency. *Learning and Individual Differences*, *61*, 21-30. https://doi.org/10.1016/j.lindif.2017.11.008

Asafo-Adjei, R., Mensah, R. O., Klu, E. K., & Swanzy-Imprain, E. (2023). Social media and English language writing performances of a Ghanaian ESL class: The Nexus. *Information & Communications Technology in Education, 10*(1)*,* 1-18. https://doi.org/10.1080/2331186X.2023.2189388

Astrid, A., Rukmini, D., Fitriati, S. W., & Syafryadi. (2021). Experiencing the peer feedback activities with teacher's intervention through face-to-face and asynchronous online interaction: the impact on students' writing development and perceptions. *Journal of Language and Education*, *7*(2), 64-77. https://doi.org/10.17323/JLE.2021.10585

Bailey, D., & Lee, A. R. (2020). An exploratory study of Grammarly in the language learning context: an analysis of test-based, textbook-based and Facebook corpora. *TESOL International Journal*, *15*(2), 4-27. https://files.eric.ed.gov/fulltext/EJ1268470.pdf

Barrot, J. S. (2018). Facebook as a learning environment for language teaching and learning: A critical analysis of the literature from 2010 to 2017. *Journal of Computer Assisted Learning*, *34*(6), 863-875. https://doi.org/10.1111/jcal.12295

Barrot, J. S. (2021). Effects of Facebook-based e-portfolio on ESL learners' writing performance. *Language, Culture and Curriculum*, *34*(1), 95-111. https://doi.org/10.1080/07908318.2020.1745822

Blikstad-Balas, M., Roe, A., & Klette, K. (2018). Opportunities to write: An exploration of student writing during language arts lessons in Norwegian lower secondary classrooms. *Written Communication*, *35*(2), 119-154. https://doi.org/10.1177/0741088317751123

Bouklikha, W. (2023). Students' English language usage of Facebook during the COVID-19 pandemic. *Arab World English Journal (AWEJ)*, *1*(1), 206-214. https://doi.org/10.24093/awej/comm1.16

Cervetti, G. N., & Hiebert, E. H. (2019). Knowledge at the Center of English Language Arts Instruction. *The Reading Teacher*, *72*(4), 499-507. https://doi.org/10.1002/trtr.1758

Cruz, J. L. (2023). Promoting learner autonomy through tandem learning in a Japanese ESL context. *International Journal on Social and Education Sciences*, *5*(1), 34–50. https://doi.org/10.46328/ijonses.424

Dhanapal, C., & Agab, S. N. (2023). Writing difficulties among undergraduate Arab students in English language: A case study of King Khalid University. *International Journal of Linguistics, Literature and Translation, 6*(2), 167-169. https://doi.org/10.32996/ijllt

Dhuli, R., Lamo, P., & Larsari, V. N. (2023). An analysis of the significance of vocabulary in fostering ESL/EFL students' writing skills: An empirical study. *International Journal of Contemporary Studies in Education, 2*(1), 26-33. https://doi.org/10.30880/ijcse.v2i1.252

Ekahitanond, V. (2018). The impact of feedback on Facebook on students' language proficiency. *TEM Journal*, *7*(3), 686-692. https://doi.org/10.18421/TEM73-28

Grigoryeva-Golubeva, V. A., Silina, E. K., & Surinova, E. A. (2023). Employing blended learning format in a professional English course for engineering students. In V. MÎndrescu (Ed.), *Research highlights in language, literature and education* (pp. 38-53). B P International. https://doi.org/10.9734/bpi/rhlle/v7/5345C

Klimova, B., & Pikhart, M. (2020). Cognitive and applied linguistics aspects of using social media: The impact of the use of Facebook on developing writing skills in learning English as a foreign language. *Investigation in Health, Psychology and Education*, *10*, 110-118. https://doi.org/10.3390/ejihpe10010010

Laganhon, M. L. A., Amador, D., Flores, K., Hilado, L., Mondejar, M. G., & Zamora, A. M. (2023). Familiarity of Facebook slang words and reading and writing practices of BA English students. *International Journal of Social Science and Human Research, 6*(3), 1392-1400. https://doi.org/10.47191/ijsshr/v6-i3-07

Lamo, P., Dhuli, R. & Larsari, V. N. (2023). Perspectives of ESL learners on the integration of technology in English language learning process: An evidence-based research. *International Journal of Contemporary Studies in Education, 2*(1), 42-48. https://doi.org/10.30880/ijcse.v2i1.254

Lim, C. L., Jalil, H. A., Ma'rof, A. M., & Saad, W. Z. (2020). Self-regulated learning as a mediator in the relationship between peer learning and online learning satisfaction: A study of a private university in Malaysia. *Malaysian Journal of Learning and Instruction*, *17*(1), 51-75. https://doi.org/10.32890/mjli2020.17.1.3

Lira-Gonzales, M. L., Chao Chao, K. W., & David, J. (2023). Technologies in English as a second/foreign language writing classes. *Folios, 58,* 173-179. https://doi.org/10.17227/folios.58-16435

Mahmud, M., Ammade, S., Halim, A., & Amin, F. H. (2022). Students' voices of the use of Facebook and Instagram in teaching English in the university context. *International Journal of Language Education*, *6*(2), 113-127. https://doi.org/10.26858/ijole.v6i2.24757

Mauludin, M. R., & Rizal, D. (2023). The use of Facebook in learn to write in the perspective of students EFL Class. *Media Penelitian Pendidikan: Jurnal Penelitian dalam Bidang Pendidikan dan Pengajaran*, *17*(1), 218-226. http://dx.doi.org/10.26877/mpp.v17i1.14268

Maznun, M. D. B., Monsefi, R., & Nimehchisalem, V. (2017). Undergraduate ESL students' difficulties in writing the introduction for research reports. *Advances in Language and Literary Studies*, *8*(1), 9-16. https://doi.org/10.7575/aiac.alls.v.8n.1p.9

Mudra, H., Mukminin, A., Fridiyanto, Hidayat, M., Marzulina, L., Harto, K., Holandyah, M., & Erlina, D. (2022). EFL learners' pedagogical views on the online social networks in EFL classrooms. *Journal of Language Teaching and Research, 13*(1), 110-118. https://doi.org/10.17507/jltr.1301.13

Nazir, M., & Brouwer, N. (2019). Community of Inquiry on Facebook in a formal learning setting in higher education. *Education Sciences*, *9*(1), 1-23. https://doi.org/10.3390/educsci9010010

Nugroho, A., Triana, Y., & Zulaiha, D. (2022). Digital teaching awareness and practice: Narratives from Indonesian ESP Teachers. *ELT Echo: The Journal of English*

Language Teaching in Foreign Language Context, *7*(1), 1-14. https://doi.org/10.24235/eltecho.v7i1.9905

Pham, V. P. H., & Hoai, A. N. T. (2021). A study of Facebook-based peer comments on L2 writing. In *Proceedings of the 17th International Conference of the Asia Association of Computer-Assisted Language Learning* (AsiaCALL 2021) (pp. 114–120). Atlantis Press. https://doi.org/10.2991/assehr.k.210226.014

Poonpon, K. (2017). Enhancing English skills through project-based learning. *The English Teacher*, *10*, 1-10. http://www.journals.melta.org.my/TET/downloads/tet40_01_01.pdf

Qassrawi, R. M., & Al Karasneh, S. M. (2023). Benefits of Facebook usage (as a web 2.0 application) in foreign language instruction in higher education: A meta-analysis study. *Cogent Arts and Humanities*, *10*(1), 1-12. https://doi.org/10.1080/23311983.2023.2185447

Rahmatullah, S., Nur, R., & Ammang, L. (2023). Need analysis to develop English writing materials for ESP instruction. *Journal of English Education (JEE)*, *8*(1), 23-30. https://shorturl.at/djIK3

Raimjanovna, I. U. (2023). Relationship between language and steam learning for English learners. *Oriental Renaissance: Innovative, Educational, Natural and Social Sciences, 3*(4/2), 257-266.

Rakhmatovna, A. U. (2023). Fixed expressions in social media writing: Frequently used collocations, misusage of words. *Мировая наука, 4*(73), 4-7.

Rakedzon, T., & Baram-Tsabari, A. (2017). To make a long story short: A rubric for assessing graduate students' academic and popular science writing skills. *Assessing Writing*, *32*, 28–42. https://doi.org/10.1016/j.asw.2016.12.004

Rianto, A. (2020). A study of language learning strategy use among Indonesian EFL university students. *Register Journal*, *13*(2), 231-256. https://doi.org/10.18326/rgt.v13i2.231-256

Sakkir, G., & Dollah, S. (2019). Measuring students' writing skills using Facebook group application in EFL context. *International Journal of Humanities and Innovation (IJH)*, *2*(3), 69-74.

Samani, E., & Noordin, N. (2019). Getting connected with Facebook messenger: exploring meaningful interactions through online chats in the ESL context. *Journal of Modern Research in English Language Studies*, *7*(3), 23-44.

Shafi, S., & Masood, M. H. (2023). Pedagogical approaches in English language learning (ell): Comparative analysis of teacher-centred approach and student-centred approach. In V. MÎndrescu (Ed.), *Research Highlights in Language, Literature and Education,* (pp. 68-77). BP International. https://doi.org/10.9734/bpi/rhlle/v7/5341B

Shousha, A. I., Farrag, N. M., & Althaqafi, A. S. (2020). Analytical Assessment of the common writing errors among Saudi foundation year students: A comparative study. *English Language Teaching*, *13*(8), 46-62. https://doi.org/10.5539/elt.v13n8p46

Sultana, S., Sarjit Singh, M. K., & Islam, R. The usefulness of digital media implementation in ESL learning among Bangladeshi students. *World Journal of English Language, 13*(6), 471-479. https://doi.org/10.5430/wjel.v13n6p471

52

Suppiah, P. C., Kaur, K., Arumugam, N., & Idham, M. (2022). Social media in ESL classroom: WeChat. *International Journal of Academic Research in Business and Social Sciences*, *12*(8), 967-982. https://doi.org/10.6007/ijarbss/v12-i8/14667

Tran, O. T. T., & Pham, V. P. H. (2023). The effects of online peer feedback on students' writing skills during Corona virus pandemic. *International Journal of Instruction*, *16*(1), 881-896. https://doi.org/10.29333/iji.2023.16149a

To, V. T., & Mahboob, A. (2017). Complexity of English textbook language: A systemic functional analysis. *Linguistics and the Human Sciences*, *13*(3), 264-293. https://shorturl.at/aen19

Un Nisa, N., Aslam, S., & Rashid, T. (2023). Studying the impact of social media on Pakistani ESL students' writing. *Pakistan Languages and Humanities Review*, *7*(2), 564-576. https://doi.org/10.47205/plhr.2023(7-ii)50

Victoria, R. (2023). Exploring factors affecting scientific attitude in secondary school students: A comprehensive analysis. In V. MÎndrescu (Ed.). *Research Highlights in Language, Literature and Education,* (pp. 38-53). BP International. https://doi.org/10.9734/bpi/rhlle/v7/5712A