Effectiveness of Trinka in Enhancing Students' Writing Quality

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Abstract
This study aims to investigate the effectiveness of Trinka software in enhancing students writing quality among twenty two semester three students of Bachelor in Applied English Language of Kolej University Poly-Tech MARA Kuala Lumpur. The researchers collected students' first and revised drafts and the data were analysed using SPSS. The paired sample t-test revealed that there was a significant difference in the mean score of the first and revised drafts. This suggested that the students' writing quality improved upon getting feedback on their grammar errors from Trinka. The software is shown to assist students in reducing errors especially in language use (grammar) and mechanics of writing (spelling and punctuation). However, the improvement of students' writing quality cannot be directly attributed to the types of changes they made. The study further revealed that the students produced high percentage of Subject-Verb-Agreement errors in their writing. The data collected from the questionnaire also shows that the students in this study demonstrated positive attitudes towards the use of Trinka in their Research Writing classroom. This research provides educators with an alternative assessment for students' writing that promotes autonomous learning.
Keywords: Trinka Software, Writing Quality, Autonomous Learning, Grammar Error, Corrective Feedback

Introduction
Writing, according to Vygotsky (1962), is a medium that reflects the progress of one's linguistic and critical thinking processes. Despite ongoing emphasis in academic on increasing writing skills, pupils' poor writing ability has been identified as a severe concern. Non-native English speakers' writing skills, according to Hinkel (2004), are still insufficient to match the requirements of higher education environments. As a result, most colleges or universities offer a variety of English writing classes with grammatical training to help students enhance their writing skills in preparation for the job market or academic success. A growing number of studies have been done to study how technology is used to assist learners' language learning in L2 writing as concerns about the importance of writing quality in higher education

develop. Students were obliged to perform academic writing projects in English as a Foreign Language on a variety of genres, such as technical reports, article summaries, or course project papers, as a result of the growing demand for English writing abilities.

Previous studies, on the other hand, demonstrated a lack of grammar accuracy in EFL students' English writing and the importance of correcting grammar problems (Ellis 1994, Ferris 2003, Lee 2005, Hyland and Hyland 2006). According to Ferris and Roberts (2001), students who got error feedback outperformed and shown stronger self-correction skills in writing classes rather than students who did not receive error feedback. Feedback on grammar mistakes, according to Chapelle (2001), brings students' attention to grammar errors in their English usage. As a result, feedback has been regarded as a useful tool for improving writing language accuracy. To charter the maximum guidance in improving the writing skills, online grammar checkers can help the educators in doing so. As a result, this study looked into the effectiveness of an online grammar checker, Trinka in improving grammatical accuracy in L2 writing, and students' attitudes towards it.

The study was conducted on BE201 (Bachelor in Applied English Language) students of Kolej Universiti Poly-Tech MARA Kuala Lumpur. Hence, this study may not be able to reach the same conclusion for all Malaysian college students. However, this research is very important in administering the effectiveness of Trinka in improving students' writing quality in Kolej Poly-Tech MARA Kuala Lumpur and to gauge the perceptions towards online grammar checker.

Research Objective
The objectives of this research are:
i)   To examine the effectiveness of Trinka in enhancing students' writing quality.
ii)   To identify the prominent grammar errors done by students in their writing.
iii)   To explore students' perceptions towards the use of Trinka in enhancing students' writing quality.

Research Question
Therefore, three research questions are addressed as follows:
iv)   To what extent does feedback from Trinka contribute to the enhancement of students' writing quality?
v)   What are the prominent grammar errors done by students in their writing?
vi)   What are students' perceptions towards the use of Trinka in enhancing students' writing quality?

Literature Review
Function of feedback in grammar writing
Hattie and Timperley, (2007) defined feedback as "information provided by an agent (e.g, teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding". In other words, feedback refers to information provided in the form of suggestion or recommendation which helps one to improvise their written work. In fact, it can be considered as advices and criticism too. However, within the context of writing, feedback can be interpreted as comments received from a reader to a writer which provides useful information for the writer to improve their work (Keh, 1990). In second language writing classroom, feedback given by the teacher or instructor usually focuses more on language errors (Frodesen in Celce-Murcia; 2002), stylistics and content of the writing

(Hartono, 2018). Content feedback normally examines on how well the writer developed or organised the ideas of their writing. While for stylistics, examiner will touch more on diction and grammar feedback will be focusing on the grammar errors made by the writer (Hartono, 2018). Since this study aimed to investigate the effectiveness of online grammar checker in enhancing students' writing quality, therefore, more details explanation on the types of grammar feedback will be discussed.

Grammar feedback can be categorised into two, direct and indirect feedback. According to Bitchener, Young and Cameron (2005), situation falls under direct feedback is when examiner or teacher identifies an error and provides a proper structure of the language errors either in oral or written form. While indirect feedback refers to a situation where teacher just points out the mistakes without providing any proper structure of the language errors. These two types of grammar feedback have been a hot debate between researchers concerning which type of feedback is better and effective in improving the student's writing quality (Hosseiny, 2014). Unfortunately, this study will not be discussing regarding this matter in depth but will focus more on whether Trinka does contribute in improving student's writing quality.

Effect of grammar checker software on writing
Grammar checker has varying degrees of effectiveness for the users. According to Jayavalan and Razali (2018), the intervention by grammar checker has helped in increasing students grammatical score in writing. To maximise the usage of grammar checker's automated feedback, it is recommended to have the teacher acts as an intermediary in giving feedback to the students so that the corrections can be identified and addressed. This is also proposed in (O'Neill and Russell, 2019). This kind of feedback is useful since it maximises the effectiveness through teacher's instruction which addresses the mistakes made and gradually addresses the error (Burston, 2008; Hoang & Kunnan, 2016). The type of feedback given is also crucial in which formative feedback is more effective than feedback that directly addresses the grammatical issues. This does not prove that effectiveness is always encouraging. Being too reliant on grammar checker can be a dangerous thing as it is based on the syntax rules that govern the semantic, pragmatic and contextual problem (Cavaleri & Dianati, 2016). This means that a sentence can be correct on the syntax level but is wrong on the semantic level. For example, the sentence "Java programs are green and yellow" is syntactically correct but semantically wrong. This is where the rules of teachers as guidance is needed, so that the students writing does not deviate too much.

Grammar Errors in Writing
Common grammar errors observed usually involves the use of article, verb, adverb, tenses (Lailika, 2019) and preposition (Hartono, 2018 as cited in Bitchener et al., 2005). This mistakes commonly happen to speakers who speak English as a second language (L2). According to Ferris and Hedgcock (2005), interference of the native language's (L1) system is the main cause of grammatical error in writing. This is proven in Hartono's (2018) study where Indonesian's students tend to misuse the preposition 'in' incorrectly when expressing time between day and night. The correct usage of preposition when expressing time can only be mastered once the learner has reached near native proficiency which can only be done if the person has read many reading materials.

Perceptions on Grammar Checker

Technology evolves rapidly and has changed the world we live in, including education field. No doubt, the invention of online grammar checker has helped in assisting second language learners in writing. The study conducted by Yang Hye Jin (2018) revealed that many students showed positive attitude towards online grammar checker as it helped them in improving their grammar in writing. This was further proven in Cavaleri and Dianati (2016) as the results were the same. In the case of Grammarly as shown in O'Neill and Russell (2019), there was no need for an additional support since Grammarly software is self-suffusion. Furthermore, the students did not give any negative feedback when using the software.

These suggest that student's perception on grammatical checker tends to be positive as it is useful to them and increases their confidence in writing. However, Grammarly is not always perfect. Lailika (2019) argued that students found Grammarly inconvenient in some ways. These are due to bad connection and incorrect grammar correction. Despite that, it comes down to the students' choice to either accept the changes proposed by the grammar checker or leave them alone (Gain, Rao, M & Bhat, 2019). In the end, the perception of grammar checker is determined by the users' attitude in using the software. A closer look to the literature on Trinka, on the other hand, reveals several gaps and shortcomings. None of the previous studies conducted found to explore its effectiveness in enhancing writing quality despite its rising popularity. Hence, a recent and more systematic research was conducted to explore on this area.

Methodology

A quasi-experimental design was the best fit for the study as it adopted a quantitative approach and aimed to explore the effectiveness of Trinka on students' writing quality. The population from which the samples were derived consists of Semester Three students of Bachelor in Applied English Language (BE201) of Kolej University Poly-Tech MARA Kuala Lumpur. Convenience sampling was employed for the selection of participants. Data were collected from students' first and revised written drafts marks before and after the usage of Trinka software as well as close-ended questionnaire comprising twenty-nine Likert scale questions (strongly disagree, disagree, neutral, agree, strongly agree) to find out about the students' perceptions on the quality and usefulness of Trinka in writing.

The data collection took around two weeks. As part of the on-going assessments for the Crafting an Effective Writer 2 subject, the students were to write a first draft of their paragraph writing on their chosen topic. The first drafts were then submitted to the lecturer for evaluation and the students were also required to upload their first draft in the Trinka software to check for errors. Based on the feedback given by Trinka, the students needed to amend their written work and submit the revised version to their lecturer for another evaluation. Students' revised works were marked by the lecturer and a second marker to avoid biasness. Subsequently, students were asked to answer the questionnaire. A pilot study was implemented to see if the questionnaire functions effectively prior to conducting the present study. The strength and consistency of internal reliability index (Cronbach Alpha value) was generated for the pilot test.

Table 1
Reliability Statistic

Cronbach's Alpha	N of items
.994	29

The data collected were analysed using the Statistical Package for the Social Science (SPSS). The means were used to investigate whether there was a significant difference between the mean score of the students' first draft before and after (revised draft) using the Trinka software. With this purpose, a paired t-test was used to examine the score differences between the first and revised drafts.

Results and Discussions

Data was collected and analysed using the Statistical Package for the Social Sciences (SPSS) version 21 to answer the research questions in this study. Both first and revised drafts were compared in order to investigate the effectiveness of Trinka in enhancing students' writing quality. The 44 writings (22 first and 22 revised drafts) were evaluated by the course lecturer and a second marker using an analytic scoring rubric prepared by the researcher. A paired t-test (two-tailed) was conducted to analyse the changes in score between the first and revised drafts. Next, textual analysis of the paragraph writings was also conducted to identify the prominent grammar errors done by the students in writing. The errors were recorded and categorised into several types namely; (1) subject-verb disagreement, (2) pronoun-antecedent disagreement, (3) missing word/fragment, (4) misspelling, (5) punctuation and capitalisation, (6) sentence fragment, (7) sentence sprawl, (8) faulty parallelism, (9) word choice and (10) incorrect pronoun case. Lastly, descriptive data collected from the questionnaires were also analysed to examine students' perceptions on the quality and the usefulness of Trinka in enhancing students' writing quality.

Students' Writing Quality
Table 2
Paired Sample Statistic

Mean			N	Std. Deviation	Std. Error Mean
Pair 1	DRAFT (/60)	43.6591	22	4.67360	.99641
	REVISED (/60)	47.0455	22	4.31749	.92049

Table 2 shows that the mean scores of the first and the revised drafts were 43.66 (SD=4.673) and 47.05 (SD=4.317) respectively. This indicates a higher mean score in the revised drafts as compared to the first drafts. The mean score of the drafts also increased by 3.39 from the first to the revised drafts.

Table 3
Paired Samples Test of Students' First and Revised Drafts

				Paired Differences					
Mean			Std. Devia tion	Std. Error Mean	95% Confidence Interval of the Difference		t	d f	Sig. (2-tailed)
					Lower	Upper			
Pair 1	DRAFT (/60) - REVISED (/60)	-3.38636	1.1845 4	.25255	-3.91156	-2.86117	-13.40 9	21	.000

A paired-samples t-test also revealed a significant difference in the mean score of the first and revised drafts [t(21) = -13.409, p =.00]. Thus, this indicates that the mean score of the students' writings after receiving feedback from Trinka (M = 47.05) was significantly higher than the mean before they received the feedback (M = 43.66).

Prominent Grammar Errors Made by Students in Writing
Table 4
Types of Errors Made by Students in Writing

Types of Error	Frequency	%
Subject-Verb Disagreement	19	43
Pronoun-Antecedent Disagreement	1	2
Missing word/fragment	4	9
Misspellings	1	2
Punctuation and capitalisation	2	5
Sentence fragments	3	7
Sentence sprawl	2	5
Faulty parallelism	2	5
Word choice	9	20
Incorrect pronoun case	1	2
Total	44	100

The errors made by the students were analysed and coded into different types, then the frequency of errors was counted for each draft. The findings as presented in Table 3 revealed that students made subject-verb disagreement errors the most (43%), followed by word choice (20%) and sentence fragments (7%). The least type of errors made are pronoun-antecedent disagreement, misspellings, and incorrect pronoun case with 2% each.

Students' Perceptions on the Quality and Usefulness of Trinka in Enhancing Students' Writing Quality

Table 5

Students' Perceptions on The Quality of Trinka

Statements	Mean	Std. Deviation
I think TRINKA is really helpful for me as a university student in checking my essay writing's grammar.	3.8636	.35125
I trust TRINKA because its feedback is accurate	3.4545	.59580
I prefer to use TRINKA because it gives detailed feedback	3.6818	.56790
I like to use TRINKA because it has many excellent features compared to any other grammar checkers and online editing tools.	3.5454	.67098
It is really recommended to use TRINKA for checking the grammar errors of English essay writing.	3.8182	.39477
I think that I would like to use TRINKA frequently.	3.7273	.55048
I think the system has user-friendly features and provides intricate publication readiness.	3.7273	.45584
I can imagine that most people would learn to use this system very quickly.	3.8182	.39477
I found the system very convenient to use.	3.7727	.52841
I felt very confident using TRINKA.	3.6364	.49237
TRINKA is really easy to use for writing essay.	3.6818	.47673
TRINKA provides helpful suggestions for improving my English essay writing.	3.6818	.56790
TRINKA lays down good explanations for the errors made in my essay.	3.7273	.45584
TRINKA has 100% accuracy in checking my grammar errors compared to the other grammar checkers.	3.2273	.68534
TRINKA provides faster feedback than any other grammar checker tools that I know of.	3.5909	.59033
TRINKA is very useful in developing my writing skills, especially for my English essay writing.	3.6818	.47673

Table 6

Students' Perceptions on The Usefulness of Trinka in Writing

Statements	Mean	Std. Deviation
I received sufficient grammar feedback from TRINKA on my assignment.	3.7273	.45584
The grammar feedback by TRINKA really focused on my main errors – i.e. those that were made a lot.	3.6818	.56790
It was easy to understand the errors because the explanations given by TRINKA were clear.	3.6818	.47673
It was easy to make grammatical changes to my work using the feedback.	3.8636	.35125

TRINKA allows me to check for conciseness, word choice, and sentence structure for better readability.	3.7273	.45584
The grammar feedback improved my assignment.	3.6364	.65795
The grammar feedback made me feel more confident about handing the assignment in.	3.7727	.52841
The grammar feedback developed my confidence in my language use in the long term (not just for this assignment) as I could understand the grammatical rules more.	3.5909	.66613
I was satisfied with the suggestions given by TRINKA on my essay writing.	3.5909	.59033
Rewriting, after receiving feedback from TRINKA, increased my motivation to write.	3.5455	.73855
TRINKA helps me get a better score/grade on my assignments.	3.5455	.59580
TRINKA helps me in finding my weaknesses in English grammar	3.8636	.35125
I would surely/ definitely use this application (TRINKA) when doing my writing assignments in the future.	3.6818	.56790

The findings revealed that majority of the students were generally very positive about the advice they received from Trinka and their experiences of using that software. This is indicated by the high mean in Table 4. Generally, the students are aware of the importance of receiving feedback on their writing assignments and believe that the feedback received improve their overall writing performance and grade. It also increased their confidence about handing in the assignment and helped them to develop their language skills beyond the assignments. The quantitative responses from the questionnaire largely corroborate the positive findings illustrated in Table 4, with 19 out of 22 (86.4%) students strongly agree with the statements, "I think Trinka is really helpful for me as a university student in checking my essay writing's grammar", "it was easy to make grammatical changes to my work using the feedback", and "Trinka helps me in finding my weaknesses in English grammar".

The paired sample t-test done revealed that there is a significant difference in the mean score of the first and revised drafts. As presented in the findings, the mean value (M) of the students' writing after receiving feedback from Trinka is 47.05, which is significantly higher by 3.39 compared to the mean value of their first drafts. The difference in the mean scores showed that Trinka did play its role in the enhancement of the students' writing quality. The results obtained for this study comply with a study done by Jayavalan and Razali (2018), in which the mean scores of the post-test (which was aided by Grammarly) surpassed that of the pre-test, suggesting a positive impact of the use of online grammar checker tool.

In general, the students perceived Trinka as a promising tool. Majority of them were satisfied with the feedback they received from Trinka and agreed that the whole process of correcting the errors was easy thanks to the clear-cut explanations provided by the system. Most students valued the implementation of online grammar checker in classroom because of the positive impact it gives to the students especially when it comes to writing (Ariyanto et al., 2021). Another aspect that is worth noting is the ability of Trinka in raising their confidence in completing the assignment and their language use beyond the assignment as the tool allows them to help find their weaknesses in English grammar and writing. This finding agrees with the study of Ventayen and Orlanda-Ventayen (2018) who discovered that there was a

noticeable change in the confidence level of the respondents after they had used the proposed online grammar checker. Additionally, O'Neill and M.T. Russel (2019) reported similar findings where the students claimed that their lack of confidence about handing in the assignment gradually receded with the help from the online grammar checker.

The findings further revealed that Subject-Verb-Disagreement was the most recurring error. These students mistakenly used singular verb for plural subject and vice versa. This could be attributed to the differences that exist between their mother tongue and the target language. For instance, there are no morphological changes indicating plurality in Malay language. The plurality features that are present in English grammar make it difficult for ESL Malaysian learners to distinguish the use of the verb 'be' in English (Idek & Lee, 2015; Arshad & Hawanum, 2010; Saadiyah & Subramaniam, 2009; Surina & Kamaruzaman, 2009). According to Kwan and Wong (2016), the nature of many Asian languages being tenseless, especially Chinese, could also be a possible reason as to why this issue persists. Little attention is given to certain grammatical features; word order and inversion due to the fact that English and Malay are both SVO languages (Chung, as cited in Govindasamy, 1994). Aside from that, some students also had trouble with the use of gerund and infinitive. The teaching of gerund and infinitive complement is another problematic area in the teaching of grammatical components. Malaysian learners are only briefly introduced to the use of gerunds and infinitives when they are in secondary school. So most ESL learners in Malaysia are not familiar with how the rules work until they get into tertiary level. According to Whittery (2001), majority of EFL/ESL learners have difficulties determining whether a gerund or an infinitive should follow after certain verbs. The second most prominent error was word choices. It can be seen that majority of the errors listed comprised words with almost similar pronunciation and spelling such as *affect-effect* and *extend-extent*. The students might get confused over the choice of words given the subtle difference in spelling and pronunciation. Additionally, this can be closely linked to the students' limited vocabulary. A study done on Malaysian undergraduates' vocabulary knowledge showed that majority of them fell in the lower band score of 50 or lesser points, indicating that these students were not equipped with necessary vocabulary level required for tertiary education (Harji et al., 2015). It can be deduced that Subject-Verb-Agreement (SVA) and word choice are among the errors commonly made by Malaysians especially Malay students. In another study, a larger proportion of Malay students committed six common errors namely singular/plural form, verb tense, word choice, preposition, subject-verb agreement and word order (Darus and Subramaniam, as cited in Singh et al., 2017).

Nonetheless, it is important to mention that some of the students received the same marks for their revised drafts. This is due to the limitations posed by Trinka itself. One of the items in the questionnaire asked if Trinka has 100% accuracy in checking their grammar errors compared to the other grammar checkers and it recorded the lowest mean value. This goes to show that the students acknowledged the inaccuracies produced by Trinka. The system was unable to detect some of the errors made by the students, especially those pertaining to sentence fragments and verb forms. Consequently, these students submitted their works with zero correction made to the revised draft. This corroborates the findings from Lailika (2019), where some of the students stated that it was not a hassle-free experience because the grammar checker did not cover all elements of writing. Even though there are various features offered by these online grammar checkers and they are seemingly competent in providing real time suggestions, it is important for teachers and students to know that these

tools might be lacking in terms of their capability of identifying all mistakes and improving writing (Iwan & Muthia, 2019).

Conclusion

In conclusion, the results of the first research question showed that the grammar checker feedback had a somewhat positive impact on improving the students' writing quality. Apart from that, the results of the paired sample t-test revealed that the mean score of the first and second drafts differ significantly. The students' attitudes toward the grammar checker were evaluated in terms of its usefulness and their trustworthiness of the software and majority of the students expressed their positive perceptions towards the grammar checker's ability to improve grammar accuracy. The grammar checker seems to be most commonly checking for faults in Subject-Verb-Agreement. All in all, it can be concluded that the grammar checker provided good feedback and help the students to be better in their writing.

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