

Improving Students' Academic Writing Quality by Using ICT Online Tools at English Tadrís Study Program in IAIN Curup

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Abstract. The complexities of academic writing need the efficient use of ICT tools to assist English students in writing. The current study focused on the above discussion. The purpose of this study was to investigate the usage of ICT tools for English academic writing, as well as their usefulness. 50 students from IAIN Curup's English department were recruited to participate. This study's data were gathered using an explanatory sequential mixed-method design via questionnaires, interviews, and student artifacts. Data were examined using both quantitative and qualitative criteria. In terms of ICT tools, this study discovered that students used a variety of online resources to improve the quality of their academic writing, including citation tools, search engines, editing tools, translation tools, monolingual and bilingual dictionaries, and a bilingual concordancer. In terms of the usefulness of ICT tools, this study discovered that online resources benefited students in a variety of ways when conducting their English academic writing assignments. As a result, using editing software, students were able to maintain proper grammar and sentence flow. The translation tool was another great resource that enabled students to broaden their vocabulary in order to speak successfully in a range of situations and registers. Students can learn more by utilizing search engines on their own. They could uncover statistics to back up their writing. In a nutshell, the use of digital tools improved the quality of students' English academic writing.

Keywords: English academic writing, ICT online tools, English learning, English students

Introduction

Students' ability to successfully negotiate meaning in written texts impacts their writing skill evaluation, leading to general agreement that the ability to write is a highly valued type of symbolic capital in all educational situations worldwide. Students' ability to read with understanding, as well as their listening and speaking abilities, is critical to their success in elementary and secondary education. In contrast, students in higher education are required to demonstrate their understanding of course subject by writing assignments and essays that synthesize the information they have read and evaluated. Academic writing, in the form of extensive and carefully drawn-out projects, academic papers, or extended essays, is the conventional approach for demonstrating expertise at the international level.

Academic writing arises as a new genre in higher education, posing a challenge for students speaking both their native and second languages. However, because English is not their first language, L2 students find the process to be much more difficult. For them, the

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problem is divided into two parts: first, learning the proper language, and second, learning the necessary academic rules to accompany it. Writing in disciplines involves not just a solid general command of the English language, but also a sufficient knowledge with writing patterns and standards unique to the field (Douglas, 2015).

Academic writing in the university context as a topic of study and practice is of great interest to both researchers and practitioners. Students are expected to be able to adapt to the unique language needs of their subjects of study when they attend higher education. This includes improving their communication abilities while also growing their understanding of the field. Although new students are assumed to have a basic command of the English language, academic writing remains a problem that requires additional progress (Bailey, 2019; Coffin & Donohue, 2012; Hood, 2010).

In this regard, the teaching of Academic writing is essential in academic settings to provide students with the capacity to understand the norms and language features used in certain fields of study. Because of this, an increasing amount of academics consider academic writing to be their main issue when it comes to academic settings (Jones, 2011; Oshima & Hogue, 2006; Zhu, 2004). Because academic writing affects undergraduate students' academic and professional achievement and gives them access to a community of practitioners in a particular area of study, researchers emphasize the significance of teaching academic writing in higher education. Furthermore, a significant number of first-year college students recognize the importance of developing their writing skills in order to improve their ability to articulate their thoughts in a way that is appropriate for academic settings, to do well in their classes, and to one day contribute to academic publications (Austin, 2002; Hunter et al., 2007; Jones, 2011). The requirement for effective teaching strategies to promote the learning of academic discourse has resulted in the development of diverse teaching techniques, as well as the incorporation of technology into academic writing instruction.

Many scholars have looked into how students utilize various writing tools and how that has changed their writing as a result of the tools' effectiveness for language students. In contrast to previous study, which mostly focused on printed dictionaries (e.g. Béjoint, 1981) The advent of computer-based resources has caused a change in focus on corpus interfaces as well as electronic dictionaries. Dictionaries and corpora are often addressed individually. Research on dictionaries often takes a comparative approach, contrasting dictionary usage with no dictionary use (Lew, 2016), contrasting paper dictionaries with online ones (Dziemianko, 2010), or contrasting monolingual dictionaries with bilingual ones (Ng, 2015). In addition, they investigate how dictionary use affects students' ability to produce and remember particular language phenomena for instance, grammatical information and examples (Chan, 2012), definitions, pictorial illustrations, and on collocations (Laufer, 2011; Lew et al., 2018), , on the middle construction (Liang & Xu, 2017).

Andersen et al. (2014) The usage of an online writing tool is one of the most common forms for allowing students to improve their academic writing skills. By detailing online evaluation and offering comments, this program can track student progress and assist students identify areas for growth. Furthermore, it presents distinct ways for promoting students' writing collaborations in unbounded time (Andreasen et al., 2014). Research on the efficacy of various online writing tools for instructing writers for specific objectives has also blossomed. The tools can be used to improve students' spelling and grammar, guide them through the writing process, assist them in coming up with ideas before they write, and allow them to work together on writing projects. Research shows that students' writing improves as a result of using the writing online tools. (Miyazoe & Anderson, 2010).

It is in this context, this research offers some perspectives on the use of online ICT Tools in writing courses, including their characteristics and types, as well as technical issues related to how to utilize various online tools for academic writing. Because ICT is becoming more popular for writing and may help students write better, this research offers some perspectives on the use of online tools in academic writing. It is claimed that if information and communication online resources were incorporated into the teaching of writing, students

would become more engaged in the topic, which would lead to an improvement in their writing abilities.

In light of these concerns, the current research looks into the various internet resources that can help students in academic writing classes. This research is guided by two research questions. First, what are ICT online tools used by students in academic writing? Second, how can ICT online tools improve students' academic writing? It is expected that the results of this study contribute to English lecturers and ELT practitioners in terms of providing information, design, and practical solutions for dealing with the application of ICT online tools in the academic writing field. The study's findings might also help make decisions about establishing curriculum, textbooks, and online modules for English language programs in the context of English language teaching at Islamic higher education institutions.

Theoretical Framework

Academic Writing

Anyone who wants to actively engage in academic communities in higher education is seen to need to be able to read, understand, and write intelligible texts (Flowerdew, 2013; Flowerdew & Wang, 2015; Motta-Roth, 2009). Undergraduate students need to be aware of the various forms of writing, be able to organize their thoughts in a logical manner, and appropriately express their meanings in accordance with the discourse norms of the specific academic community in which they are members. Only then will they be able to accomplish the goals outlined above (Flowerdew, 2000; Johns, 2008).

In academic writing, one must select one's words very carefully in order to convey complicated concepts to scholarly readers. The process of producing an academic paper involves not only the act of writing itself, but also the creation of meaning and the engagement in social interaction (Byrnes, 2013; Gebhard et al., 2013; Ryshina-Pankova, 2015). A student's academic life is shaped in large part by the school papers they write, particularly in college. Academic writing is a talent that must be acquired since it shapes our thinking, how we portray ourselves to others, and how we successfully and efficiently express key concepts (Johnson, 2016). In summary, a key element in predicting a student's success in college is their capacity to access, evaluate, and synthesize the thoughts and viewpoints of other writers in order to develop their own academic voice (Gebhard et al., 2013; Johnson, 2016).

Teaching Academic Writing

A lot has been written about how academic writing is taught in higher education (Bailey, 2019; Miyazoe & Anderson, 2010; Wingate, 2012). According to studies, college students should be specifically taught academic writing in order to prepare them for the many assignment kinds, such as case analyses, summaries, papers, research reports, essays, and literature reviews; (Cooper & Bikowski, 2007; Hyland, 2015). In order to write effectively in the classroom, students must understand the components of various writing styles as well as the appropriate use of discourse structures and linguistic elements in various contexts (Hyland, 2015; Jones, 2011).

In this sense, Raimes and Jerskey (2012) assert that teaching writing for academic purposes requires university students to have a strong understanding of academic genres. This is due to the fact that cultivating academic genre awareness aids students in determining the aim and potential audience, combining concepts from many sources, and presenting their position. Additionally, college students must comprehend acknowledged writing systems like quote marks, cites, and references in order to include evidence and support into their work (Jordan, 2002).

The importance of teachers in assisting students to improve their writing and overcome writing deficiencies has been further examined by research on academic writing. Many researchers maintain that language teachers are essential in helping students learn academic writing (Apriani, Labiran, et al., 2022) and exposing them to academic discourse communities so they can participate and engage in written communication, despite Spack's

(1988) claim that "English teachers cannot and should not be held accountable for teaching writing in the disciplines" (p. 40) (Jordan, 2002)

The Quality Academic of Writing

The following factors should be kept in mind when writing academic papers. Academic writing has an organized, formal, and objective format, with abstract and sophisticated terminology used often. Academic writing is connected with academic activities or writing as lecturers and researchers perform for publication and conference participation by academics (Bailey, 2008; Thaiss & Zawacki, 2006).

Five academic writing talents must be achieved, according to Hedge (in Murray and Christison, 2011). For starters, students can show a high level of organizing ability, which allows the topics in their writing to be easily comprehended. Following that, students demonstrate outstanding writing correctness by paying close attention to technical terms to avoid misconceptions. Third, in order for information to be communicated, students must control their use of grammar as writers. Additionally, the author must be conversant with the discipline's vocabulary, and students as writers must be able to integrate all of these skills in order to produce a style that is acceptable for the reader and context.

Both Jalongo (2022) and Richards and Miller (2005) provide a wide picture of the basic requirements of academic writing in education when it comes to distinguishing an educational writing style. According to Jalongo, an author should examine some elements, such as using the writings of prominent authorities in the area to define specialist vocabulary and professional jargon, avoiding using esoteric phrases that will alienate people of the intended audience, removing clichés and replacing them with the author's own figurative language, using specific facts, analogies, and examples to stress essential points and bring concepts to life, and eliminating unnecessary language, redundancy, and double-speak.

Many of Jalongo's comments are reiterated by Richards and Miller (2005). They emphasize the need of thoroughly scrutinizing each word to ensure that the language is appropriate for the audience. They stress the importance of concentrating on the target audience. They suggest that if a lecturer wants his or her work to seem formal and scholarly, the tone should match. Richards and Miller, like Jalongo, stress the need of avoiding jargon and clichés in academic writing. Additionally, they advocate for the use of concrete nouns in writing to facilitate the reader's comprehension. This is complemented by the notion that non-contributing adjectives and adverbs should be eliminated. They also imply parallel patterns in the writing. "Fluency and readability" are the outcomes of this. They stress the need of avoiding sexist and gender-biased language in writing. Finally, Richards and Miller recommend that you use the passive voice only when absolutely necessary. The passive voice is commonly used to produce dry, academic writing (Richards & Miller, 2006).

In terms of educational writing style, they recommend the following: First, the author makes transitions as seamless as possible, with one section flowing naturally into the next. To indicate what will be said in the next section or subsection is a weak form of transition. Second, if the author seems unsure, he can spell it out. Unless they are widely used, acronyms should be used sparingly and specified from the outset. Third, the author does not use the passive voice. Fourth, the author avoids anthropomorphizing (i.e., give human-like characteristics to a non-human form). Fifth, the author avoids jargon and overuse of words. Sixth, it is not recommended that the author use "this" as a stand-alone pronoun; instead, modify a noun with it. The antecedent for "this" is frequently unclear.

Klingner, Scanlon, and Pressley state that the publishing guide of the American Psychological Association recommends these standards. They begin by saying that these are the most common mistakes that writers make when writing for educational audiences, and as editors, they hope that authors would focus on fixing them.

Allan Glatthorn is the author of several publications on curriculum, curriculum development, and curriculum leadership. He has also authored books on dissertation writing and professional writing. He devoted a chapter to academic writing style in his book, "Writing the Winning Dissertation: A Step-by-Step Guide" (Glatthorn, 1998). Despite this, the majority of the chapter is devoted to paper creation, organizing, and following standards, even in this

format. He does, however, provide sound counsel. He emphasizes the need of clarity, maturity, and formality in academic writing, as well as striking a balance between confidence and trepidation. He also says that a writer should utilize simple phrases and create clear, mature sentences with the primary point in the main clause. He, like other authors of his type, advises against using the passive voice in writing. After that, he offers the following advice: using jargon in a discriminatory manner, keeping trendy expressions to a minimum, using formal phrases instead of colloquial ones, using contractions sparingly, avoiding the use of adjective nouns, avoiding the use of "we" and "our" in general, staying away from the second person in wordings, and avoiding the use of sexist masculine pronouns when referring to guys and females.

ICT in Education

Since the introduction of technology into the sphere of education, the strategy and technique of teaching have evolved fast. It is now simpler for lecturers to prepare their lectures utilizing various ICT technologies, making learning more effective for students. ICT has had a significant influence on education, particularly language instruction, during the previous decade (Apriani & Hidayah, 2019; Sanjaya et al., 2020). When it comes to EFL instruction, it has virtually become an important component of the classroom. ICT tools can be categorized not only computer but other mobile devices as well. Ghavifekr et al. (2016, p.39) state that "ICT tools" are the standard technological instruments used in classrooms, including computers, laptops, LCDs, digital photocopiers, digital audio and video equipment, digital cameras, scanners, DVD players, and multimedia projectors. Information and communication technology, or ICT for short, is a broader term that refers to a variety of technological tools that are used to support education and other academic fields simultaneously. The utilization of computer technology, projectors, the internet, and various multimedia tools are key components of classroom instruction at the higher levels of education (Ghavifekr et al., 2006). As stated by UNESCO, creating and implementing ICT-enabled teacher programs is "the key to fundamental, far-reaching educational changes." Based on ICT study, the usage of ICT has increased teachers' enthusiasm in their teaching, and they have implemented several fascinating and creative approaches in their classrooms with the assistance of ICT. As what Glover et al. (2005) stated, ICT has helped lecturers to uncover new and exciting classroom applications for improved technology utilization (Glover et al., 2005).

With the advent of new technology, the world has become a global village in which we may interact with anybody on the planet in seconds. This breakthrough enables us to take benefit of research being performed for the purpose of improving the quality of education provided to students. Learners have two significant options for developing skills utilizing cutting-edge technology. According to Kent and Facer (2004), the first place in which students utilize technology in a broad range is school, but learner involvement with computer activities becomes narrower at home (Kent & Facer, 2004). As ICT has been proven to be a strong instrument for educational reform, it is now widely used in the educational area, allowing lecturers to give lectures more successfully and interactively. ICT study has also shown that using ICT enhances educational standards and establishes a link between theory and its practical application, generating real-life circumstances for learners to grasp numerous phenomena that would be impossible to understand without ICT (Lowther et al., 2008; Weert & Tatnall, 2005).

The learning process accelerates as students become more actively involved in ICT classrooms, making it simpler for teachers to improve students' decision-making and reasoning abilities (Lu, Hou and Huang 2010). ICT has transformed the teaching-centered environment into a student-centered one (Castro Sánchez & Chirino Alemán, 2011). Both lecturers and students benefit from ICT since it enhances educational options and affordances. ICT may also be a vital tool that students utilize in the learning process to investigate new topics, uncover novel concepts, resolve problems, and come up with solutions. ICT supports student-centered, self-directed learning (Kovalik et al., 2013). Students engage in purposeful technology usage by gathering the necessary data, curating

the content, and arranging it in accordance with the requirements of the project. ICT can help learners become more inventive and critical assessors of their learning material (Castro Sánchez & Chirino Alemán, 2011). ICT has an influence on communication skills (Apriani & Handrianto, 2021) since it allows learners to communicate ideas and cooperate anytime, anywhere. It enables students to assess their problems and clarify their views, therefore improving their critical thinking skills. ICT fosters the development of higher-level concepts.

ICT for Education is being recognized as one of the most potent and productive topics of study in the future to exploit its effectiveness in many ways in education worldwide, as advised by a growing body of ICT literature to consider and apply ICT with the greatest effects. Numerous research' conclusions demonstrate that using ICT-based pedagogies with students has a good impact. When computer-based technology is correctly incorporated, it may enhance global knowledge, encourage pair and group collaboration, improve experiential learning, provide access to real resources, and encourage more engagement.

The Information Technology (IT) Tools for Teaching Writing

Based on Semenov (2005), information technology (IT) is a natural instrument in education since learning is fundamentally dependent on dealing with information. Off-computer information processing includes listening, speaking, reading, writing, comforting, assessing, synthesizing and analyzing, solving mathematical issues, and memorizing poems and state capitals. Even more crucially, IT may be utilized for other forms of information processing, such as project planning or the search for new knowledge outside of school textbooks, which were previously marginal in conventional schools but are now becoming increasingly vital.

It appears digital technology offers many facilities to overcome the problems which occurred in teaching and learning activities. The problems such as time, place, or interaction and communication can be reduced by using it. Moreover, digital technology implementation in education can also develop the students' language skills like their speaking, listening, reading, and writing skills. In writing, digital technology has been proven beneficial to assist students in improving their writing. Several applications such as Quillbot, Turnitin, Mendeley, and Grammarly are amongst these applications. Quillbot helps an author paraphrase his written words. Turnitin helps an author check the degree of plagiarism that he has made either intentionally or unintentionally. Mendeley is a free citation and social networking software for academics. Mendeley helps an author cites any source he has read in accurate and proper ways. Grammarly helps an author check the grammatical accuracy of his writing.

Materials and Method

The explanatory sequential mixed-methods design was used in this study. (Cohen et al., 2018; Creswell & Poth, 2018; Heigham & Croker, 2009). As the foregoing, this study was initiated by working on the quantitative data and ended by processing the qualitative data. The rationale of using mixed method for this study was based on the following reasons: First, the present study used quantitative and qualitative approaches to have solid understanding of the phenomenon. Second, the data for the present study were in the form of qualitative and quantitative data. Third, the design of collecting data consisted of two stages: collecting quantitative data and collecting qualitative data.

The subjects of the research were 50 (fifty) students of English Study Program. The selection of the participants was determined from the consideration of the students who were taking academic writing course. Hence, they could provide the data which were relevant to the goal of the study. They had also taken basic ICT subjects, so they were regarded as having basic digital literacy skills. The researcher anticipated that the study's materials and tasks would be appropriate for their English and digital literacy abilities. Additionally, the next consideration was that these student teachers potentially have a good opportunity to implement what they have experienced and learned during this program in their own teaching in the near future.

This study's data came from student artifacts, interviews, and questionnaires. This study used triangulation of data, which necessitated these several data sources in order for

the researcher to fully comprehend the phenomenon (Yin, 2003) Additionally, it gave readers a wide range of perspectives on the subjects this research is discussing (Cohen et al., 2007). This research used three methods of data collection: questionnaires, interviews, and student artifacts in order to fulfill data triangulation requirements. Every technique used for gathering data is significant and helpful in promoting various viewpoints on the subject at hand. It also significantly adds to a more comprehensive image of the scene of interest. These many data sources also allowed the researcher to do in-depth analysis, which in turn helped the researcher organize the study for transferability and validation procedures and to establish a wide repertory of contextual perspectives toward the case.

With regard to the instruments of the research, Researchers used three instruments. First, online questionnaires were used to gather quantitative data related to the types of online tools for academic writing and how these tools foster students' academic writing quality. Subsequently, the rubrics on academic writing were used to compare the result of students' writing before and after using ICT tools in academic writing. The interview will figure out students' perception and opinion of using ICT tools in writing. While document observation is the record of students' competence in writing before and after using ICT tools in writing.

The data was analyzed by Researchers using two techniques. The information gathered from the online questionnaire was presented and disseminated by Researchers using a descriptive-statistic technique to processing the quantitative data. The qualitative information obtained from the observations and interviews was then interactively analyzed using Miles' et al. (2014) model. The data collection, data condensation, data presentation, and conclusion drawing were the four interconnected parts of this paradigm. As was previously mentioned, observations and interviews were used to gather qualitative data. By categorizing the raw data from observations and interviews according to emerging themes, further simplification was achieved. Data coding processes are another term that may be used to describe data condensation. In addition, Researchers used an inter-coder reliability approach to identify significant coded motifs drawing upon O'Connor and Joffe (2020), Academics collaborate to establish excellent coding, and inter-coder reliability is essential to this process. The raw qualitative data was first coded by us, the study's researchers. To select the most relevant coding results for the final themes to be presented, we compared and examined our various data codification outcomes. Subsequently, the qualitative data were presented as tables including results from data codification, data visualization, interview transcripts, data interpretation, and theoretical and argumentative discussions. Lastly, a comprehensive and representative presentation of the aforementioned facts was made.

Results and Discussion

Results

ICT Online Tools Used by Students in Academic Writing

During the writing portion of the assignment, students should feel free to consult any relevant online materials. Figure 1 shows the frequency distribution of students' use of different search tools together with their corresponding 95% confidence intervals. Around half of the student body utilized some sort of editing tool, with another 15% or so making use of translation software. The use of search engines by students was likewise high. Almost one in ten students reported using a citation manager, such as Mendeley or Zotero. Students utilized both bilingual and monolingual dictionaries in their academic work (8.40% and 4.40 respectively). The bilingual concordancer had the lowest usage rate of any instrument, at 1%.

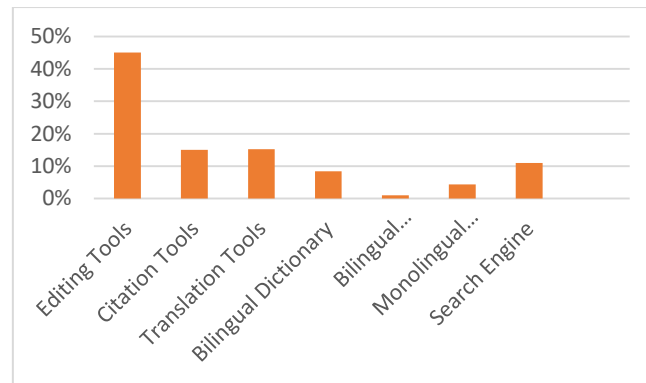


Figure 1.
Online tools used by students

The range of learning resources utilized by individual students varies widely. Figure 2 shows that most students utilize between one and four distinct types of learning tools, whereas eight students use five, six students use six, and only two students use all seven. Of those students who use more than one type of tool, 78.3% continue to rely on bilingual tools for more than half of their searches, proving that one tool type almost always predominates. Overall, this demonstrates how students favor using bilingual tools and how they tend to rely on a small set of tool types while writing.

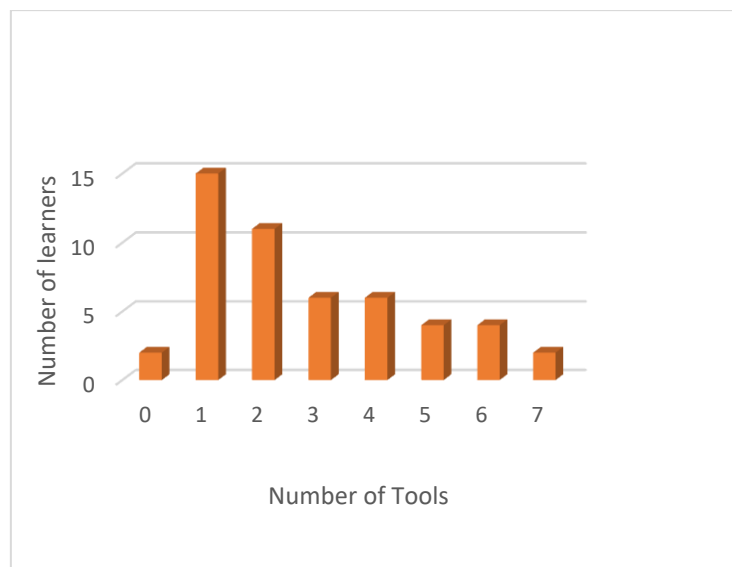


Figure 2.
Number of tool types used per number of learners

The information gleaned from the questionnaire was corroborated by the information obtained in the interview. The interviews revealed that students use a number of ICT tools for academic writing. In order to edit or paraphrase their writing, some of the students made use of editing software such as Grammarly, QuillBot, and Ginger, amongst others. The translation tool is another another tool that students usually make use of when they are composing academic work. They frequently did translation work from sources written in Bahasa Indonesia into English. Several translation systems, including Google Translate, DeepL, Bing Translator, and others, were discussed in the interview. Another technology that was frequently utilized by students was the search engine. Students increasingly turned to search engines like Google, Yahoo, and AOL in order to look up material and resources that they might use in their writing. The students also made use of concordances and

monolingual dictionaries in their studies. Table 1 summarized the tools that students used in their academic writing.

Table 1.
ICT Tools Used by Students

Types of ICT Tools	Names of Application
Editing Tools	Grammarly Ginger Zoho Writer Writer Language Tool Quillbot Virtual Writing Tutor
Citation Tools	Mendeley Cite. Zotero. EndNote.
Translation Tools	Google translate Bing Translator. DeepL Translate Translatedict. Translate.com
Bilingual Dictionary	DeepL. Google Translate. WordReference. Linguee. Reverso.
Bilingual Concordancer	Lextutor
Monolingual Dictionaries	Collins Wiktionary Google Dictionary Oxford Cambridge
Search Engine	Google Yahoo Bing Bing AOL Baidu

ICT Online Tools Improve Students' Academic Writing

The improvement of students' academic writing was gained by calculating students' writing before and after the ICT online tools was implemented in teaching writing. To figure out the improvement, students' writing before and after implementing ICT online tools was compared using descriptive statistic. It was found that students' writing before using ICT online tools was not satisfied enough because there were many students on the level of 'good' writing competence than in 'very good' level.

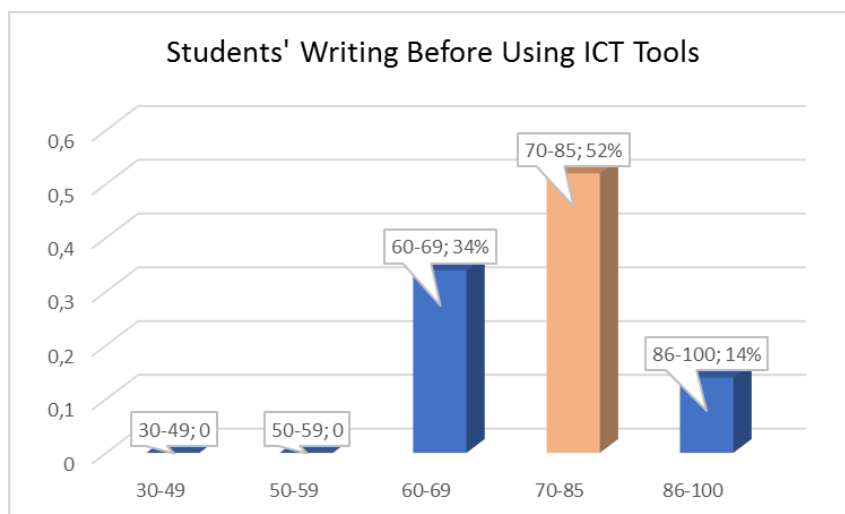


Figure 3.
Students' Academic Writing of TBI A before Using ICT Online Tools

The graphic above shows the academic writing of TBI A before ICT online tools were used. There were only 14 % on very good level and many students were in good level of academic writing. The moderate students was approximately 34% of the entire students of Class. Meanwhile after the ICT online tools were used in teaching academic writing there is an improvement of their writing as follows:

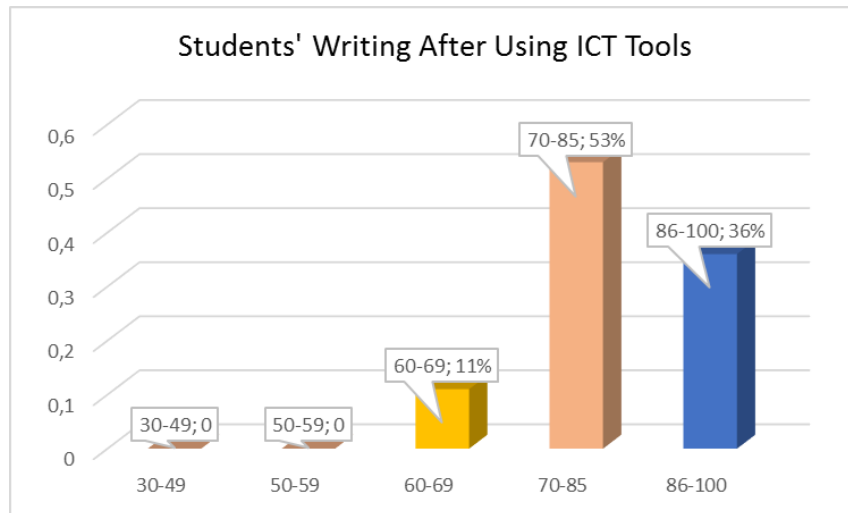
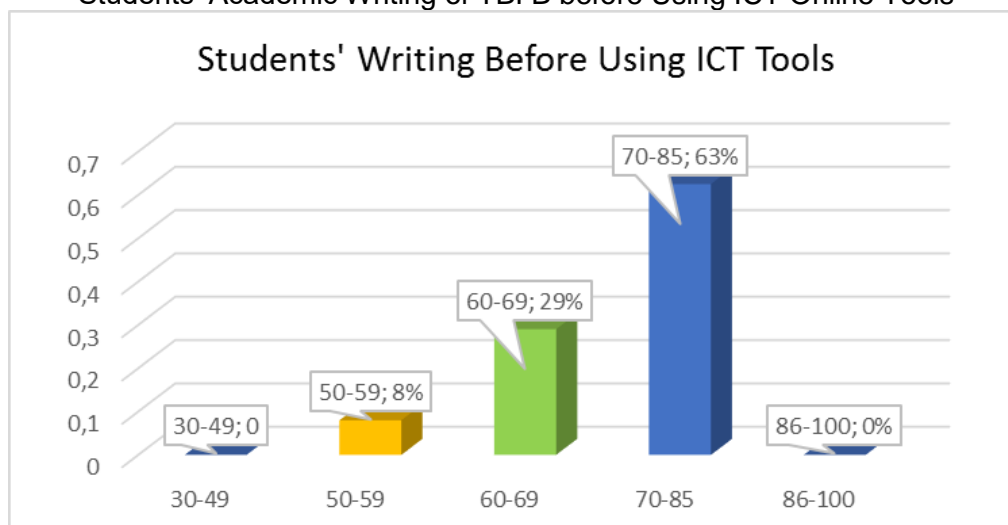


Figure 4.
Students' Academic Writing of TBI A after Using ICT Online Tools

The graphic shows that there is an improvement of students' academic writing after using ICT online tools in teaching writing. The students in moderate level was 11% compared to the achievement before using ICT tools. There was a decrease of the students who were in moderate level about 25%. The 'very good' level of academic writing had improved 57% that 36% students was in level very good after ICT online tool were implemented in teaching writing. However, in the 'good' level decreased to 10% compared to the data before ICT online tools were used.

On the second class (TBI 5B), before the ICT tools was used in teaching academic writing the result of students' writing is not satisfied as none of the students on the 'very good' level, even though there were 63% of the students were in 'good' level.

Figure 5
Students' Academic Writing of TBI B before Using ICT Online Tools



There were 8% got D (poor writing) where the score was in the range of 50-59 and 29% or about 7 students in 'moderate' level or about 29% students. After implementing ICT online tools in teaching academic writing for class TBI B, there was an improvement of students writing with satisfactorily results.

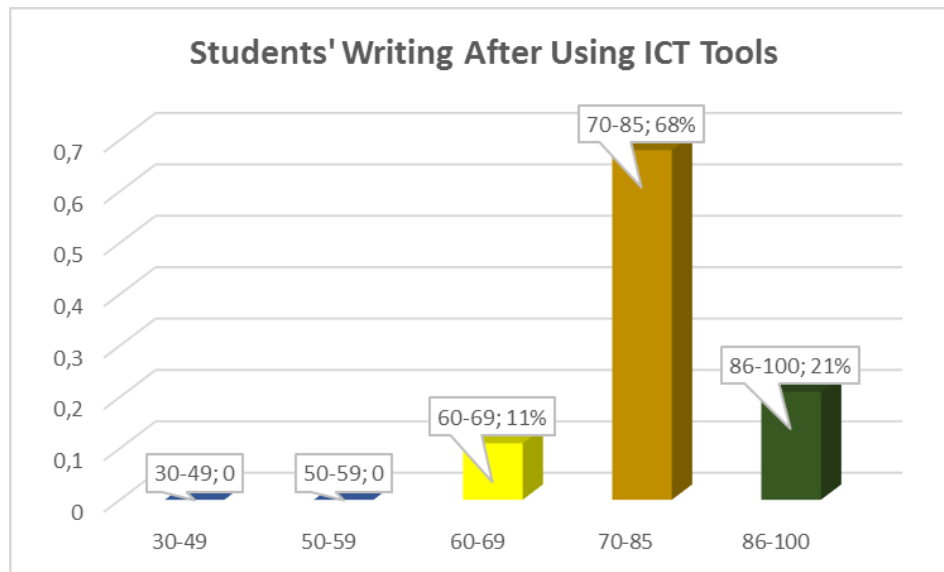


Figure 6.
Students' Academic Writing of TBI B after Using ICT Online Tools

There were 100% improvement in poor writing level from 8% into 0% who got poor writing after ICT online tools was used. In moderate level from 29% has decrease into 11 % which means there were 71% improvement of students' academic writing. In 'very good' level the improvement was 100% from none of the students got A (very good) into 21% (4 students).

There was also a significant improvement found in TBI C after using ICT online tools for academic writing. Before ICT online tools was used none of the students were in very good level or got grade A and there were 45% of students were in moderate level of writing.

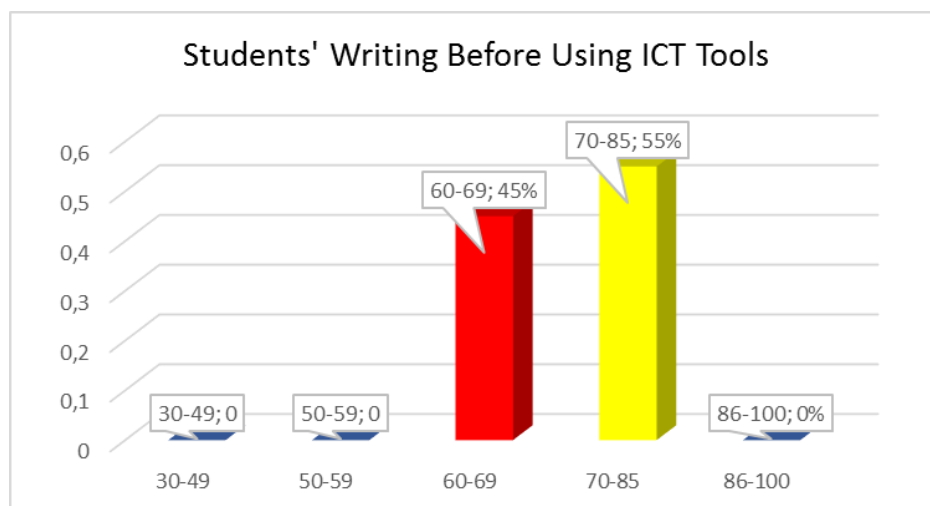


Figure 7.
Students' Academic Writing of TBI C before Using ICT Online Tools

The students who were in good level of academic writing were 55%. Even though none of the students were in poor level of writing but the biggest concern was there were

many students in moderate and good level and none of the students were in very good level. Therefore, the decision to use ICT online tools to improve academic writing was needed.

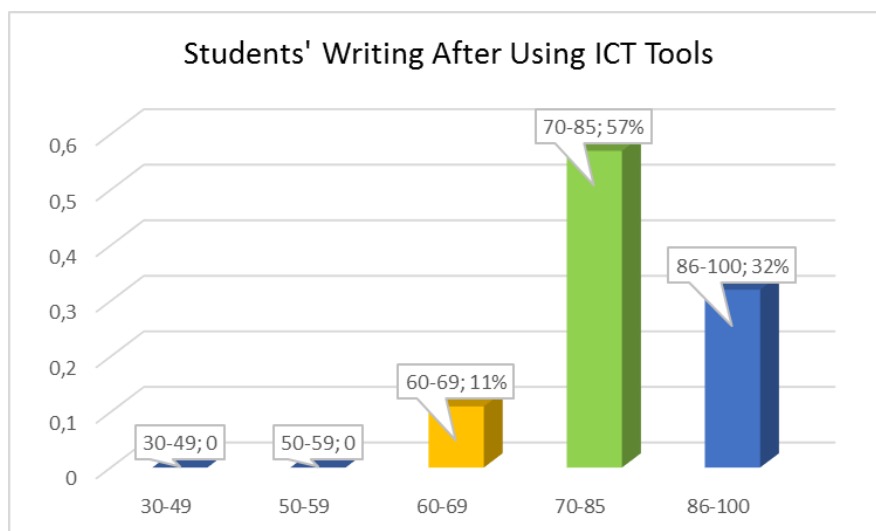


Figure 8.
Students' Academic Writing of TBI C after Using ICT Online Tools

The result of students' academic writing after using ICT online tools in teaching academic writing had satisfied result. From the graphic 6. The students who were in moderate level had decreased about 78% from 45% (9 students) to 11 % (2 students). Meanwhile the students who were in very good level had increased from 0% to 32 % (6 students). And the students in good level of academic writing remained the same that was 11 students or 55% before using ICT online tools to 57% after using ICT online tools in writing.

According to the findings of an analysis of the students' artifacts, there was a discernible rise in the level of academic writing produced by the students. The findings are summarized in the table that follows.

Table 2.
Qualitative analysis on Students' Artifacts

TRAIT	Before Using ICT Tools	After Using ICT Tools
Logic & Organization	Does not develop ideas cogently, uneven and ineffective overall organization, unclear introduction or conclusion	Develops ideas cogently, organizes them logically with paragraphs and connects them with effective transitions. Clear and specific introduction and conclusion.
Language	Employs words that are unclear, sentence structures inadequate for clarity, errors are seriously distracting	Employs words with fluency, develops concise standard English sentences, and balances a variety of sentence structures effectively.
Spelling and Grammar	Writing contains numerous errors in spelling and grammar which interfere with comprehension	While there may be minor errors, the writing follows normal conventions of spelling and grammar throughout and has been carefully proofread the reader
Development of Ideas	Most ideas unsupported, confusion between personal and external evidence, reasoning flawed	Supports most ideas with effective examples, references, and details, makes key distinctions
Purpose	The purpose and focus of the	The writer has made good decisions

writing are not clear to the reader about focus, organization, style, and content so as to achieve the purpose of the writing.

An examination of the students' academic writing revealed that, prior to utilizing the resources provided by ICT, the students were unable to develop ideas in a way that was logical and well-organized. The text was organized in a way that was both inconsistent and inefficient. The introductions and conclusions that the students produced were not clear. Their writing could be described as having the following characteristics: (1) there were some attempts at order and structure, even though the writing still contained problems; (2) there was obvious paragraphing; (3) there were attempts at sequencing and transitions between ideas; and (4) the introduction and conclusion were developed to some degree. After incorporating ICT tools into the composition of academic texts, students showed significant improvement in the quality of their academic writing. Students were able to produce unified and cohesive concepts inside paragraphs with typically appropriate transitions, a clear overall arrangement that related the majority of ideas together, as well as a decent introduction and conclusion.

In terms of language, after integrating ICT tools in their academic writing students were able to apply words with greater fluency, produce succinct and Standard English sentences, and effectively balance a variety of sentence structures academic writing. Every sentence has a structure that is powerful and effective. They could benefit from using a wide variety of sentence structures and durations, each of which has been carefully selected.

Based on the results of the analysis, students' writing had a significant number of spelling and grammar mistakes that hampered readability before they started utilizing ICT tools. However, the findings revealed that using ICT tools improved spelling and grammar in academic writing. While it was possible that a few typos snuck through, rest assured that all of the material adhered to standard spelling and grammar rules and was proofread thoroughly.

The usage of ICT internet tools demonstrated that students may improve how they developed their thoughts in their text. The supporting information was appropriate for the purpose and audience. External sources of information were synthesized and incorporated into the text. They could make strong arguments and their reasoning was free of logical flaws. Furthermore, the topics addressed in the writing demonstrated that the student was improving their understanding of the disciplines, genre's questions, ideals, and approaches.

The writing that students produced after using ICT tools revealed, with reference to the aim of the writing, that students had successfully achieved the purpose of the writing by making sound decisions regarding emphasis, organization, style, and content.

Discussion

Using ICT online tools in academic writing perhaps a new thing for the students but the impact of it can be seen from the result On their academic writing after using ICT internet tools to write. The result of students' academic writing indicated that they have explored a new way in learning writing using digital technologies and have more exciting atmosphere in learning academic writing. It is in accordance to the Miller et al. (2005) who stated that ICT has helped lecturers to uncover new and exciting classroom applications for improved technology utilization. Digital technology is widely used in education and using it in teaching learning process will give a good effect to students' progress in learning as well as the product of learning.

The results of the questionnaire and the interview suggested that the proliferation of ICT-based online resources is beneficial to students in the process of academic writing (Apriani, Santiana, et al., 2022). It was important for students to use ICT and internet research tools when writing academic papers. Students have to strengthen their writing skills in order to succeed. It is therefore not surprising that editing tools have become the online tools that are utilized the most frequently by students. Students had access to editing tools that allowed them to verify their grammar and rephrase the paragraphs they had written.

Students had the belief that employing various forms of text editing increased the overall quality of their written work. Translation tools were yet another resource that had a considerable impact on the literature produced by students. Students can utilize them to translate necessary material from their first language into English or English into their first language. Students might have a better way to cope with their lack of vocabulary by using these resources, which are available to them.

The data gleaned from the students' artifacts also demonstrated that the students' writing skills increased as a direct result of their use of the ICT Online tools. Students developed their thoughts in a logical manner by using the tools available online (Apriani, Arsyad, et al., 2022). They broke it down into paragraphs using a logical structure, and then connected each paragraph to the next using strong transitions. They were able to compose an introduction and conclusion that were both understandable and specific. Students were able to use words more fluently with the assistance of online resources. They were able to generate Standard English sentences that were clear and concise and properly balance a variety of sentence forms. Students were also able to support the majority of the concepts in their writing with good examples, references, and details with the help of online resources.

Conclusion

After describing the findings of the present study. Two conclusions can be drawn from this study. First, with regard to the utilization of ICT online tools in academic writing, it was discovered that these students made use of a variety of online resources in order to enhance the caliber of their academic writing. Because of their usefulness in the process of writing academic content, the internet tools were selected. The students utilized a variety of resources, including citation tools, search engines, editing tools, translation tools, monolingual dictionaries, bilingual dictionaries, and a bilingual concordancer.

Second, this study found that the online tools that students use in academic writing aid students in various ways, particularly with regard to the application of ICT online tools to improve the quality of students' academic writing. Students were able to maintain their grammar and phrase flow under control with the aid of editing tools. The translation tool was another useful resource that encouraged students to expand their vocabularies in order to communicate effectively in a variety of contexts and registers. Students can learn more by using search engines themselves. They might find data to support their writing. In a nutshell, the utilization of digital resources helped improve the caliber of students' writing.

As a direct consequence of this, an increased number of researchers are anticipated to carry out scientific research on the aforementioned two variables. In addition, researchers can conduct a psychometric analysis in order to develop a theoretical model by investigating The interaction of growth mindset, metacognition, and learning engagement as predictive variables for the efficacy of ICT online tools. This may be done to generate a theoretical model. Additional research might look into how English teachers use scaffolding to help their students develop their growth mindsets, metacognition, and learner engagement when they are engaged in ICT-based learning.

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