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“Optimizing Innovation in Knowledge, Education and Design”

EXTENDED ABSTRACT



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NO.	TITLE	PAGE
1.	EZ-ARGUE: Empowering Students to Master the Art of Argumentative Writing <i>Nik Ahmad Farhan bin Azim @ Nik Azim, Nur Hafezah binti Hussein, Arifuddin bin Abdullah, Ahmad Zaki bin Amiruddin & Suhaida binti Omar</i>	1-5
2.	Kids Daily Flip Planner <i>Gladys Sebi Entigar, Milfadzhilah Mohd Jamil, Roziana Ahmed & Nashrah Talib</i>	6-10
3.	Framework for a Sustainable Smart Retirement City: A Local Perspective <i>Mohd Zool Hilmie Mohamed Sawal, Nazni Noordin, Zaherawati Zakaria, Muhammad Syahmizan Azmi, Adnan Aminuddin & Zakba Bin Shafie,</i>	11-15
4.	Kickresearch Module: Research Proposal Made Easy! <i>Azlyn Ahmad Zawawi, Intan Syahriza Azizan, Noorlailahusna Mohd. Yusof, Junaida Ismail & Nor Ardyanti Ahmad</i>	16-22
5.	Gamifying Tax Learning: RPGT Interactive Game for Effective Tax Education <i>Norhayati Sulaiman, Irda Syahira Khair Anwar, Siti Marlia Shamsudin, Norul Akma Mansor & Roslan Abdul Wahab</i>	23-28
6.	Master of Flood Preparedness (MOFP): Game-Based Learning to Prepare Youth to be Aware, Prepared, and Resilient in Facing Floods <i>Mohd Rozaimy Ridzuan, Jamal Rizal Razali, Soon-Yew, Ju, Lai-Kuan, Kong, Amirudin Mohd Zani & Noor Amira Syazwani Abd Rahman</i>	29-34
7.	Learning Through Metaverse: Exploring the Role of Virtual Reality to Enhance English Language Proficiency <i>Stefanie Natasha Rich Joseph, Daryl Albright Doubless John, Cindy Robert, Fakhira Jafri & Tracy Adeline Ajo</i>	35-39
8.	Learning Mandarin as A Third Language Among Non-Native Speakers by Using Alpha M (An Educational Card Game) <i>Sheau Ping Wee, Ai Nyet Chan, Chin Ying Liew & Yit Lian Liew</i>	40-44
9.	Green Banking Unveiled: Insights Into Student Perspectives on Sustainable Finance <i>Liyana Ab Rahman, Maslinawati Mohamad, Siti Marlia Shamsudin, Faros Faizdnor Roslan & Fatimah Alwi</i>	45-50
10.	Go GP: Greening Your House Starter Pack <i>Asmah Alia Mohamad Bohari, Zafikha Aida Bidin, Siti Nurul Ainun Mohd Mustafa, Natasha Khalil, Norliana Sarpin & Afiqah Iliyana binti Samsul Bahari</i>	51-55
11.	Tiktelligence: Making Learning Trendy, Memorable, and Fun! <i>Zafikha Aida Bidin, Sylvia Gala Mong, Syamimi Liyana Amat Rais, Farah-Ajlai Julaihi & Nur Illiana Husin</i>	56-60

Assalamualaikum warahmatullahi wabarakatuh,



First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality. I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services. By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality. I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said
RECTOR
UiTM KEDAH BRANCH



WELCOME MESSAGE (i-SPIKE 2023 CHAIR)



We are looking forward to welcoming you to the 3rd International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "*Optimizing Innovation in Knowledge, Education, & Design*". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPIKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPIKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail

Chair

3rd International Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023)

EZ-ARGUE: EMPOWERING STUDENTS TO MASTER THE ART OF ARGUMENTATIVE WRITING

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ABSTRACT

The development of written argumentation in academic settings has been slow and is often characterized by subpar quality. Criticisms of argumentation rhetoric and its patterns highlight the prevalence of fallacies in argumentative writing. Numerous studies have identified the root of this problem as a complex interplay between linguistic, sociocultural, and cognitive factors. Additionally, Covid-19 pandemic has introduced challenges to the teaching and learning of argumentative writing; necessitating modifications in instructional design and approaches to address the intricacies of argumentative writing. In response to the pressing concerns, many instructors have turned to technology as a mean to bridge the pedagogical gap, particularly in the realm of academic writing practices. This study proposes the utilization of EZ-Argue, a technology-mediated tool designed to support students in their practice of argumentative essay writing. Specifically targeting weak and average students, EZ-Argue models functional words, phrases, and sentence patterns that are pertinent to argumentative genre. A textual analysis of 167 argumentative essay scripts were carried out to examine the impact of EZ-Argue as a treatment on student's writing and the delivery of argumentative writing instructions. The findings indicated most frequent errors were found at formation of thesis statement, counterargument, and refutation. The analysis also revealed a positive outlook of these three elements when EZ-Argue was used as a treatment. Pedagogically, the findings of this study were expected to provide valuable insights to instructors informing them about the potential and effectiveness of employing such a tool in facilitating argumentative writing instructions.

Keywords: argumentative writing, writing tool, writing instructions, writing pedagogy, genre approach

INTRODUCTION

The emergence of written argumentation in academic context is slow to develop and generally of poor quality. The argumentation rhetoric and its pattern are often being criticised for the fallacy of argumentative writing. A large body of studies (Hyland, 2003; Schneer, 2014; Ferretti & Graham, 2019; Luna et al., 2020) suggested that the problem is attributed to the complex relationship of linguistics, sociocultural and cognitive factor. The transformation of education landscape due to the impact of Covid-19 pandemic has also created a caveat in teaching and learning pedagogy of writing. Hence, urging instructors to modify the existing instructional design and approaches. In line with such pertinent issue, many instructors have adopted technology as a mediating tool in bridging the pedagogical gap, including in academic writing practices. Hence, the inception of EZ-Argue; a technology-mediated tool for argumentative writing. This digital tool is designed to scaffold students' argumentative essay practice especially among weak and average student by modelling functional words, phrases and sentences pattern which are related to argumentative genre. This tool will be used as a treatment to understand the extent of EZ-Argue impact on targeted student's argumentative writing.

Argumentative Writing

Writing in English as Second Language (ESL) setting can be very challenging especially when it involves academic discourse such as argumentation. Due to the requirement of understanding genre type, the Commonwealth European Framework of Reference for Language (CEFR) even classifies argumentative writing as an expected output for B2 students. Implementing argumentative writing as part of the assessments of Integrated Reading and Writing (IRW) course in Universiti Malaysia Kelantan (UMK) unveils several challenges including defining rhetoric of arguments and imparting explicit genre instructions to students within the context of heterogeneous classes; as pre-requisite for this course is Malaysia University English Test (MUET) Band 3 and Band 4. Currently, the instructional approach for argumentative writing includes modelling of text type and collaborative writing between students and instructor. In addition to that, online exercise sheets and notes, video and slides related to argumentative writing are also made available on UMK Learning Management System (LMS).

Despite such effort, students did not perform well in February Semester of 2021/2022 as 64% out of 121 students exhibited issues with their counterargument and refutation. Although students are explicitly exposed to the genre since their school years-in preparation for their MUET Examination, poor performance in the argumentative writing could be attributed to a few factors including insufficient amount of instructional approach or disorganized exposure to the genre instructions or a part of thereof. The amount of such exposure may also vary between MUET Band 3 and Band 4 students. Such discrepancy illustrates a pedagogical disconnection that exist between literatures and the current instructional practice.

The shift of pedagogical approach that focuses remote learning due to Covid-19 outbreak is another significant factor. Conducting classes remotely and provisioning of learning materials via LMS poses another set of challenges in an already challenging task of academic writing. Current pedagogical approaches and instructions should not be postulated and overgeneralized as its impact could be equivocal. Adaptation and assimilation on this matter seem paramount. Therefore, there is a need for systematic integration of genre instructions and instructional approach into a learning tool such as EZ-Argue that may scaffold student's writing process; particularly benefitting the average and weak students. This tool will remain valid, even post-pandemic time, as it will overcome some of the challenges in learning argumentative writing.

Technology in Academic Writing

The incorporation of technology in language learning, particularly in academic writing has shown positive outcomes. Tools like Microsoft Words and Grammarly offer immediate feedback on. Linguistic elements, aiding language accuracy. However, existing tools have limitations in addressing language issues and genre instructions needs. Customised digital tools are needed to address specific genres and learning contexts. Factors impacting tool effectiveness include flexibility, accessibility, increased feedback, and student comfort. Consequently, suggesting a need for further research and development of customize writing tools based on genre and proficiency levels to enhance student achievement in writing.

In acknowledging these challenges, EZ-Argue conceptualises argumentative writing withsome degree of automation by using the technology. Instead of employing traditional writing methods, utilizing a user-friendly webtool with an optimized genre writing approach can be a time-saving and effective strategy. The use of EZ-Argue tool as part of the instructional approach in the classroom will facilitate better understanding on how explicit genre instructions embedded in EZ-Argue are affecting student's performance in argumentative essay writing. As argumentative writing is also taught at other educational institutions of various level including schools, EZ-Argue will offer a significant commercial potential. This is particularly relevant and an important learning tool for students who will sit for MUET as one of its writing focus is on argumentation. Such undervalued market on learning tool segment for this group of students can be seen as a potential to be immediately tapped.



Figure 1. Conceptual Framework of EZ-Argue

FINDINGS

A total of 167 essay scripts written by students who enrolled in Integrated Reading and Writing (UBI20302) were analysed. The essays were part of their formative assessment. The findings revealed three most frequent errors occurred in those scripts, namely: thesis statement 's background formation, counterargument formation and refutation formation. Consequently, formation of these elements was compared between pre- and post-treatment. The representation of such findings is illustrated in Figure 2:

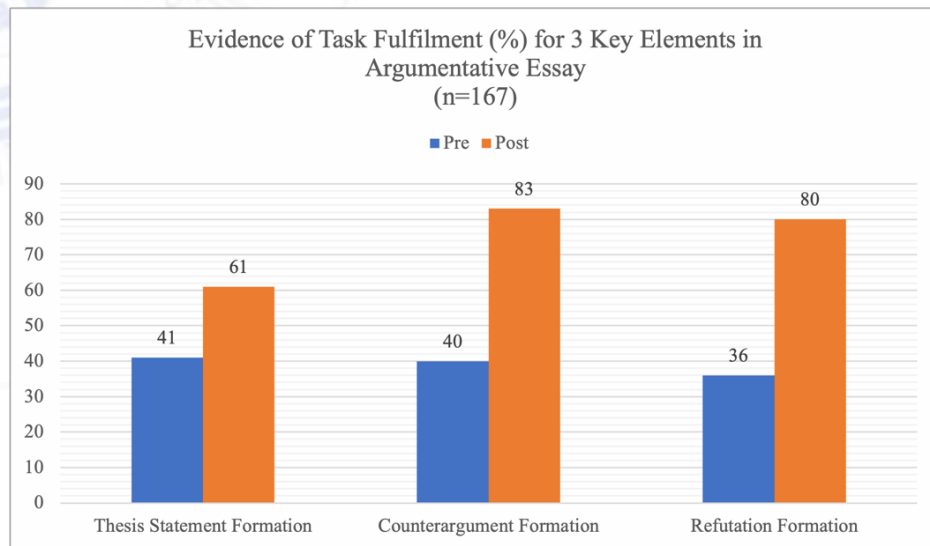


Figure 2. Evidence of Task Fulfilment for 3 Key Elements in Argumentative Essay

Additionally, a structured, Likert-scale rated questionnaire were administered post-treatment. The questionnaire is aimed at understanding the perception and attitudes towards the use of EZ-Argue. The questionnaire separated into two main sections: 1) Writing in Digital Tool and Traditional Environment and 2) Attitudes Towards Technology. The finding is exhibited in Figure 3.

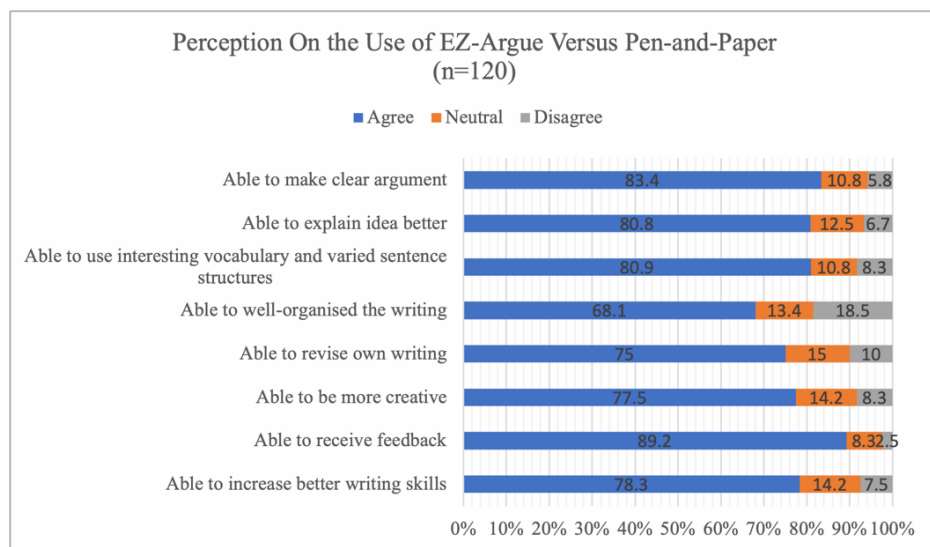


Figure 3. Perception On the Use of EZ-Argue Versus Pen-and-P

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