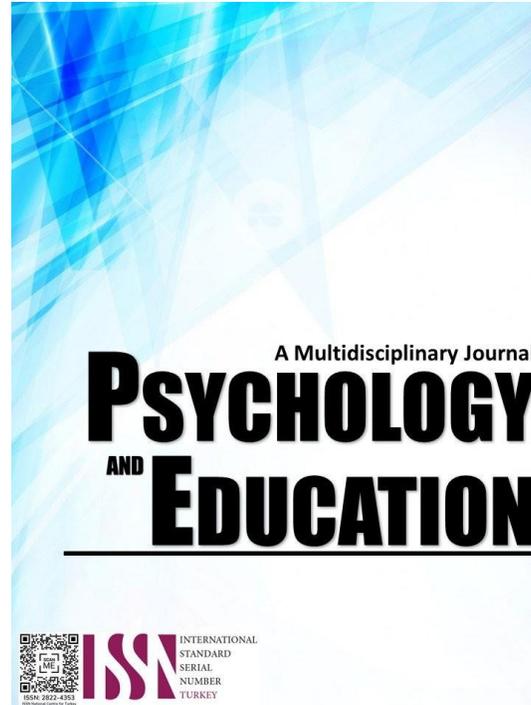


# ENHANCING THE WRITING SKILLS OF GRADE 11 STEM STUDENTS THROUGH PROCESS APPROACH VIA VIRTUAL CLASSROOM



## PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 39

Issue 1

Pages: 25-31

Document ID: 2025PEMJ3740

DOI: 10.70838/pemj.390104

Manuscript Accepted: 05-05-2025

## Enhancing the Writing Skills of Grade 11 STEM Students through Process Approach via Virtual Classroom

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### Abstract

In the context of 21st-century education, integrating technology into pedagogy, such as using virtual classrooms, offers writing teachers effective tools to sustain student engagement. The process approach to writing, which emphasizes stages like planning, drafting, and revising over final output and linguistic accuracy, aligns well with technological tools to develop students' writing habits in innovative ways. This study aimed to enhance the writing skills of 90 Grade 11 STEM students through the implementation of the Process Approach to Writing in a virtual classroom setting, with the dual objectives of improving student writing performance and innovating pedagogical practices in writing instruction. Employing an explanatory sequential mixed-methods research design, the study utilized validated, researcher-developed instruments to collect both quantitative and qualitative data. Instruction focused on position paper writing, guided by the five stages of the process approach: prewriting, drafting, revising, editing, and publishing. Quantitative findings indicated a statistically significant improvement in students' writing performance, as evidenced by the comparison of pretest and posttest scores. Qualitative data further revealed two key themes related to learners' experiences in virtual classrooms: (1) collaborative engagement and peer interaction, and (2) technical challenges and interruptions. The integration of quantitative and qualitative data highlighted three emergent constructs: (a) the value of peer collaboration and feedback, (b) the iterative nature of the writing process, and (c) persistent challenges in virtual learning environments. Overall, the findings suggest that the Process Approach to Writing, when implemented in a virtual classroom, is an effective strategy for enhancing students' writing competencies. The results have implications for the development of instructional strategies for teaching writing in online learning contexts.

**Keywords:** *process approach, writing instruction, virtual classroom, mixed-methods research, STEM education*

### Introduction

The integration of technology into pedagogical practices has become a defining feature of 21st-century education. As digital tools continue to transform the educational landscape, educators are increasingly adopting technology-enhanced approaches to improve teaching and learning outcomes. Among these is the integration of the Process Approach to Writing—a pedagogical method that emphasizes the stages of writing rather than solely focusing on the final product. This approach encourages students to engage in planning, drafting, revising, editing, and publishing, thereby promoting deeper cognitive engagement and fostering the development of effective writing habits (Hyland, 2003; Onozawa, n.d.; Badger & White, 1999; Tribble, 1996).

While the process approach has been widely implemented in traditional classroom settings, its application in virtual learning environments remains relatively underexplored. The rise of virtual classrooms in response to the demands of digital education offers new opportunities and challenges for writing instruction. Virtual classrooms provide an interactive platform equipped with synchronous and asynchronous tools that facilitate collaboration, feedback, and active engagement—core components aligned with the stages of the process approach. As such, understanding how this instructional model performs in virtual settings is both timely and necessary.

In this context, Information and Communication Technology (ICT) plays a crucial role in sustaining student interest and motivation in writing. ICT has become an integral part of students' academic lives, and writing teachers can leverage its capabilities to foster a more engaging and student-centered writing experience. Platforms such as virtual classrooms not only provide flexibility and accessibility but also support a variety of writing activities that are essential for developing communication skills, particularly among senior high school students in the Science, Technology, Engineering, and Mathematics (STEM) strand.

Writing instruction in the senior high school curriculum, particularly within the Reading and Writing subject, emphasizes the development of writing competencies critical for both academic success and global competitiveness. However, research suggests that secondary students often lack the cognitive and metacognitive strategies necessary for effective reading-to-write tasks in online environments (Mateos et al., 2018). Furthermore, studies such as that of Perveen (2016) demonstrate that combining synchronous and asynchronous modalities in virtual classrooms creates an optimal environment for language learning. Thus, it is imperative for educators to adopt innovative, process-oriented approaches to assess and enhance students' writing performance in these digital contexts.

Despite the documented benefits of the process approach to writing, there remains a gap in the literature concerning its implementation in virtual classrooms, particularly regarding its influence on students' cognitive and metacognitive engagement. This study seeks to address this gap by evaluating the effectiveness of the Process Approach in Writing when delivered through a virtual classroom and by exploring students' experiences with this method.

Specifically, this research aims to: (1) determine the level of writing proficiency of Grade 11 STEM students, (2) assess whether there

is a significant difference in students' writing performance before and after the implementation of the process approach via a virtual classroom, and (3) explore the writing experiences of students engaged in this approach within an online learning environment.

## Methodology

### Research Design

The study utilized the mixed-method approach using the explanatory sequential mixed method. In this approach, this combines quantitative and qualitative approaches in two-phase process. Firstly, it collects numerical data to identify patterns or trends, and then follow up with qualitative data to explain or provide deeper insights into those findings (Creswell & Plano Clark, 2017).

### Participants

This study investigated the writing proficiency of 90 Grade 11 STEM students using the Process Approach to Writing within a virtual classroom environment. Participants were selected through convenience sampling, as they were enrolled in the Reading and Writing subject, which includes a lesson on position paper writing—an appropriate context for the application of the process approach. For the qualitative phase of the study, six students were purposively selected from among those who obtained notably low scores in the quantitative phase to gain deeper insights into their experiences and challenges with the writing process in a virtual learning setting.

### Instrument

The instruments employed in this study included a researcher-developed writing prompt, an analytic writing rubric, and a semi-structured interview guide. All instruments underwent content validation by subject matter experts to ensure their appropriateness and reliability. The writing prompt served as both the pretest and posttest and was designed to assess students' writing proficiency in the context of composing a position paper—a task aligned with the implementation of the Process Approach to Writing.

The second instrument was an analytic writing rubric, which guided the evaluation of student essays before and after the intervention. The rubric comprised three major criteria, each containing specific performance indicators with assigned weightings. Scores were assigned on a four-point scale, ranging from 1 (Novice Writer) to 4 (Expert Writer), thereby providing a structured and consistent framework for assessing writing proficiency.

The third instrument was a semi-structured interview guide used during the qualitative phase. This guide was designed to explore students' experiences with the use of virtual learning platforms, specifically Quipper LMS and Google Classroom, about their writing tasks. The interviews aimed to elicit detailed insights into students' engagement with the Process Approach in a virtual learning environment, particularly focusing on their cognitive and metacognitive writing experiences.

### Procedure

Prior to the actual implementation of the writing lesson through the virtual classroom and the interview with the participants, proper protocol was followed. When all the logistics were prepared, the researcher conducted an orientation to the participants. During the orientation, the participants were made to understand that they were going to have a series of writing activities using the virtual classroom.

The first part done in this study was pre-test. The pre-test was administered to the students and they were asked to write a position paper following the writing prompt. The activity was done through the virtual classroom. After the submission of the students' outputs, the researcher gave their papers to the inter-raters for rating. For this study, the researcher adopted Hyland's (2003) five-stage writing process which is the following; pre-writing, drafting, revising, editing and publishing.

The pre-writing stage signaled the start of the writing process approach. In this stage, the topic was introduced and parts of an essay were also discussed like the introduction, body, and conclusion. The purpose of writing, the audience, and the text structure was also discussed. Then, they were asked to brainstorm and organize their ideas. This stage focused on stimulating students' creativity and letting them think about what to write and how to approach the chosen topic.

After organizing their ideas, the next activity was drafting. In here, they were reminded to emphasize on the content, not on the mechanical aspects such as grammar, punctuation, and spelling. As Muncie (2000) stressed out that this stage consists of creating a rough draft without concern for mechanics. The ideas should come freely and words that come out from their minds should be written quickly. If the students have the difficulty in writing, they have to go back to their notes in pre-writing.

Next part was revising. Revising promoted collaboration of students-teacher and students-students. The teacher commented the students' works and the students also comment on their classmates' works. Not only commenting, but also there will be suggestions and are able to share each other's work. The teacher here gave feedback to students' output. The students then change the substance of their paper because the content was the main concern.

After revising was editing. In this stage, the students proofread their work. They paid attention to mechanics such as grammar, punctuation, and spelling. This also involved careful checking of the text to ensure that there was no error in spelling, word order, word choice, and punctuation. Their peers also helped them in editing. The students were expected to increasingly identify and correct own

words. In here, their draft was polished and the final output was ready to hand out.

The last phase was publishing which was the final stage of the writing process. In this stage, the writing outputs that were revised and edited may be published. After the process, the researcher measured the students' writing performance in the form of a post-test. The same writing prompt in the pre-test was utilized and their outputs were rated by the same inter-raters using the same rubric of that of the pre-test.

### Data Analysis

The data obtained in the study were interpreted quantitatively and qualitatively. To answer Problem 1, mean and standard deviation was utilized to determine the level of writing proficiency of the G11 STEM students. In assessing the performance of Grade 11 STEM students before and after exposing them to the process approach in writing through virtual classroom, paired sample t-test was administered to determine whether there was a statistically significant mean difference between their performance before and after. For Problem 3, thematic analysis was used to determine their experiences in the use of virtual classroom. Each theme was created from the codes derived from the transcripts of narratives. The themes were grouped in terms of the level of groundedness manifested from the interview (Boyatzis, 1998).

## Results and Discussion

The results were presented and discussed based on the problems presented in the introduction. This was done to thoroughly present the findings, analysis, and interpretation of the results.

### Level of Writing Performance of Grade 11 STEM Students

The students' writing performance level in this study was based on the mean they obtained from the pretest and posttest administered to them. Table 1 shows the level of writing performance of the Grade 11 STEM students before and after implementing the Process Approach in Writing via the Virtual Classroom. The results indicated that the learners obtained the level of intermediate writers before implementing the Process Approach in Writing and improved after becoming advanced writers, as shown in the overall mean in the table.

Table 1. *Level of Writing Performance of Grade 11 STEM Students*

Criteria	Pre-test			Post-test		
	Mean	SD	QD	Mean	SD	QD
1. Organization						
1.1. Clarity	2.54	.43	AW	2.93	.46	AW
1.2. Logic	2.51	.47	AW	2.98	.49	AW
1.3. Coherence	2.53	.45	AW	3.09	.56	AW
2. Development of Ideas						
2.1. Reliability	2.51	.45	AW	3.05	.52	AW
2.2. Clarity of Supporting Ideas	2.49	.39	IW	3.10	.51	AW
2.3. Consistency	2.50	.43	IW	3.08	.46	AW
3. Use of Language/ Conventions & Grammar						
3.1. Appropriateness of Diction	2.45	.36	IW	2.96	.43	AW
3.2. Grammatical Accuracy	2.46	.32	IW	2.96	.42	AW
3.3. Accuracy of Spelling, Capitalization and Punctuation	2.45	.35	IW	3.03	.37	AW
OVER-ALL	2.49	.41	IW	3.02	0.47	AW

Legend: NW- Novice Writer, IM – Intermediate Writer, AW – Advance Writer, EW – Expert Writer

The results of the study revealed a marked improvement in the writing proficiency of Grade 11 STEM students following the implementation of the Process Approach to Writing within a virtual classroom setting. Based on the analytic rubric used, students' overall performance advanced from the intermediate level in the pretest to the advanced level in the posttest, indicating a positive impact of the instructional intervention.

In terms of organization, students maintained an advanced level both before and after the intervention. This suggests that, even prior to the implementation of the process approach, students demonstrated the ability to structure their ideas logically and coherently. This may be attributed to prior exposure to writing tasks, which likely enabled them to relate to familiar topics and organize their thoughts effectively. As supported by Nabhan (2016), the process approach assists learners in building coherent sentences that support main ideas, and as Dokchandra (2018) noted, it enhances students' creativity and systematic organization of ideas across the stages of writing. Hartono (2019) further emphasized that the approach encourages learners to focus on the writing process rather than the appearance of the final product. Feedback, in this context, played a crucial role—it was provided not only through symbolic or brief notations but also via descriptive and formative comments that explained errors and guided revision.

Regarding the development of ideas, students showed notable progress from the intermediate to advanced level after the intervention. Prior to the application of the process approach, their outputs reflected inconsistencies and a limited presentation of reliable facts. This changed significantly during the posttest phase, where the integration of peer and teacher feedback during the revising stage of the writing process contributed to richer content development. This collaborative component of the process approach aligns with findings

by Li and Razali (2019), who highlighted the value of sustained practice and feedback in developing strong writing habits. Similarly, Xu and Li (2018) and Jalaluddin (2019) emphasized that iterative planning and revision cycles foster more meaningful and well-developed written outputs.

In the criterion of language use and conventions, students improved from intermediate to advanced levels. Pretest compositions exhibited frequent grammatical, mechanical, and syntactical errors. However, after the intervention, students demonstrated greater control over language conventions, with significantly fewer errors and more appropriate word choices. This finding supports Sheir et al. (2015), who argued that the process approach provides students with the freedom to express ideas before focusing on linguistic accuracy, reducing the cognitive load of simultaneous idea generation and error correction. Moreover, the observed gains in mechanics can be attributed to the revising and editing stages of the process approach, where students were required to proofread and refine their drafts. Yeung (2019) suggested that this approach enhances learner autonomy, which is especially valuable in virtual learning environments.

These improvements in grammar, vocabulary, and structure are consistent with findings by Umamah and Cahyono (2020), who reported that students often struggle with vocabulary, grammar, and mechanics without guided instruction. The process approach, particularly when implemented in online settings, provided the structured guidance needed to overcome these challenges. Regala-Flores and Lopez (2019) and Alshakhi (2018) also observed that students often face difficulties organizing ideas and integrating sources, which the process approach addresses through its recursive and scaffolded structure.

### **Difference in STEM Students' Writing Performance Before and After the Implementation of the Process Approach Via Virtual Classroom**

This study examined the difference between the pretest and posttest through a paired-sample t-test approach applied in analyzing the scores of the Grade 11 STEM Students before and after their exposure to the process approach in writing via the virtual classroom. The data in Table 2 presents a significant difference in the pretest and posttest scores of the learners, as shown by the computed p-value (0.001), which is less than 0.05 set as the level of significance.

*Table 2. Difference of STEM Students' Writing Performance Before and After the Implementation of Process Approach Via Virtual Classroom*

	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Mean Difference</i>	<i>p-value</i>	<i>Remark</i>
Pre-test	55	2.49	.41	0.53	0.001	Significant
Post-test	55	3.02	.47			

The data presented shows an increase in scores from pretest to posttest, evident in the mean score difference of 0.53. This result implies that the use of the Process Approach in Writing via the virtual classroom significantly improved students' writing scores. This further means that the intervention via virtual classroom was effective.

The significant difference in the mean scores of the pretest and posttest can be explained by the development of writing skills, which involves dealing with the writing process, which involves multiple stages and emphasizes content rather than language and grammatical use. With this, the students were aware of the various methods writing, which helped them with their difficulties because of the help of their classmates and the guidance of the teacher. These findings corroborate the results of multiple studies that use the Process Approach in Writing, which indicates a significant difference in students' writing performance (Novia & Saptarina, 2021; Kurniasih et.al, 2020; Vikneswaran & Krish, 2015). It was also found that the use of the process approach combined with Screencast-o-matic and Bookcreator had a crucial contribution to argumentative writing development in which participants responded positively towards the implementation of the process approach combined with Screencast-o-matic and Bookcreator (Maharani & Santosa, 2021). The immersion of technology is also effective in a writing activity in which peer review can be a more immersive experience with online feedback compared to traditional written feedback as its boundary can make more efficient use of any communicative resources everywhere and every time (Tham, 2016). Integrating technology into the teaching and learning process provides learners with several options, such as studying alone, cooperating, and collaborating with their classmates worldwide.

Correspondingly, the students' significant high scores during the posttest show that the process approach helped them develop their writing skills. These findings support the idea that the process approach to writing significantly impacted the improvement of students' writing skills, and students taught using the process approach in writing performed better than those not taught (Nabhan, 2016, Sheir et.al, 2015). The process approach to writing is a realistic technique for improving pupils' writing talents. As a result of incorporating a process approach, the research participants did well in writing.

### **The Writing Experiences of the STEM Students in Using Virtual Classroom**

The students' responses to the interview questions regarding their experience using a virtual classroom were derived from their answers, which were grouped according to the similarities of their experiences and assigned to themes.

Collaborative Engagement and Peer Interaction in Virtual Learning Spaces. The virtual classroom promoted collaboration and interaction among students and teachers through the implementation of the Process Approach in Writing. It could be noted that the

virtual classroom allowed students to collaborate and interact among themselves since they were all given the chance to share their outputs with their classmates, and each had to interact with at least two classmates. The virtual space allowed them to discuss their thoughts on the topic, which helped them improve their output. Below are samples of their responses:

Student 1. I liked it that all of us in the class learn from each other. Due to the pandemic, the school made use of online learning and the virtual space did not hinder our learning because we are interacting and helping one another especially in this task.

Student 2. I got to share my ideas and help my classmates in their paper, it seems I'm part of their success. I also appreciate the feedback from my other classmates.

Student 3. I appreciate when my classmates and teacher made some corrections with my output especially with the spelling, grammar and punctuations. Because of that, I was able to improve my writing.

Collaborative learning, as emphasized by (Vygotsky, 1978) Social Development Theory, posits that knowledge is constructed through social interactions and that learning occurs more effectively when individuals work together. The students' reflections confirm this, as they acknowledged the positive impact of peer engagement on improving their writing skills.

Technical Challenges and Interruptions in Virtual Learning. During this research, students also highlighted and experienced the drawbacks of using technology. They experienced interruptions like intermittent connection and sudden unexpected loss of power supply. Below are the students' responses regarding interruptions in virtual space.

Student 1. I am from Lantapan and the internet connection is not really good. Sometimes, my internet connection is very lagging... which hinders me to grasp the instructions well...

Student 2. There was one time that I got lost due to power interruption. There was no notice in our place that there will be brownout, that's why there was a time I was not able to attend the class.

Student 3. I was using home prepaid wifi in our home. There are times that it's full bar signal but when I surf the internet, the connection was very intermittent.

Despite these technical setbacks, students demonstrated resilience and adaptability which led them to manage to complete their writing tasks. This aligns with (Hodges et.al, 2020) who argue that students often develop self-regulatory strategies to navigate online learning challenges. While virtual classrooms provided valuable learning opportunities, students faced technological difficulties that disrupted their writing process.

### **Integration of Quantitative and Qualitative Findings**

Based on the integrated findings from both the quantitative and qualitative phases of the study, it can be concluded that the implementation of the Process Approach to Writing via a virtual classroom significantly enhanced the writing performance of Grade 11 STEM students. Quantitative results demonstrated a statistically significant improvement in students' overall writing scores, with notable gains in organization, development of ideas, and use of language and conventions. These improvements can be attributed to the structured, iterative nature of the process approach, which encourages multiple drafts, peer review, and targeted feedback. Complementing these findings, qualitative data revealed that students benefited from collaborative engagement in the virtual environment, where interaction with peers and instructors fostered deeper reflection and revision of their work. Additionally, while students encountered technical challenges such as internet connectivity issues and power interruptions, they demonstrated resilience and adaptability, underscoring their commitment to the writing process. Overall, the convergence of both data sets supports the effectiveness of the Process Approach to Writing in virtual learning contexts and highlights its potential for fostering cognitive engagement, writing autonomy, and improved performance.

### **Conclusions**

The findings of this study demonstrate that the Process Approach to Writing, when implemented in a virtual classroom, has a significant positive impact on the writing performance of Grade 11 STEM students. Students progressed from intermediate to advanced levels of proficiency, particularly in areas of organization, idea development, and language use. The virtual classroom not only served as an effective platform for delivering writing instruction but also fostered meaningful peer collaboration and feedback—critical elements in the writing process. However, the study also revealed that students encountered technical interruptions, such as unstable internet connectivity and power outages, which at times hindered their full participation in writing activities. These challenges, while managed through student resilience and adaptability, may have delayed the feedback and revision process, potentially affecting the pace and consistency of writing development.

The results suggest valuable implications for educators and curriculum designers seeking to enhance writing instruction in online settings. Incorporating the process approach into virtual classrooms can cultivate writing proficiency while supporting student autonomy and engagement. However, to maximize its effectiveness, schools and teachers must also consider infrastructure support and contingency plans for mitigating technological disruptions.

Future research may explore the long-term impact of the Process Approach on students' independent writing beyond structured classroom activities, or examine its effectiveness across different academic strands and year levels. Additionally, a deeper investigation into how specific types of interruptions influence various stages of the writing process—particularly peer feedback and revision—would provide further insight into optimizing virtual writing instruction.

## References

- Alshakhi, A. (2018). Revisiting the writing assessment process at a Saudi English language institute: Problems and solutions. *English Language Teaching*, 12(1), 176. <https://doi.org/10.5539/elt.v12n1p176>
- Badger, R. and White, G. (1999). *A process genre approach to teaching writing*.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications
- Dokchandra, D. (2018). The effects of process writing approach on performance of an overcrowded EFL writing class at a university in Thailand. *KnE Social Sciences*, 191–206. <https://doi.org/10.18502/kss.v3i4.1931>
- Hartono, H., Anwar, C., & Murtiningrum, A. (2019). Corrective feedbacks and grammar teaching in a situated teaching context of process-based writing. *Register Journal*, 12(1), 28. <https://doi.org/10.18326/rgt.v12i1.28-48>
- Hyland, K. (2003). *Writing & teaching writing*. In J.C. Richards (Ed.), *Second Language Writing*. Cambridge: Cambridge University Press.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EDUCAUSE Review*.
- Irawansyah, I. (2016). Genre based approach: A way to enhance students' writing ability. *English Education: Jurnal Tadris Bahasa Inggris IAIN Raden Intan*, 9(1), 74–88. <https://doi.org/10.24042/ee-jtbi.v9i1.420>
- Jalaluddin, I. (2019). Process approach in teaching of ESL writing: Teacher's assistance and its practicality in real classroom. *Journal of Research, Policy & Practice of Teachers & Teacher Education*, 9(2), 66–78. <https://doi.org/10.37134/jrpptte.vol9.no2.6.2019>
- Kurniasih, F., Sholihah, A., Umamah, A. & Sung, I. (2020). Writing Process Approach and Its Effect on Students' Writing Anxiety and Performance. *ResearchGate; Perpustakaan Universitas Andalas*. [https://www.researchgate.net/publication/346706470\\_Writing\\_Process\\_Approach\\_and\\_Its\\_Effect\\_on\\_Students'\\_Writing\\_Anxiety\\_and\\_Performance](https://www.researchgate.net/publication/346706470_Writing_Process_Approach_and_Its_Effect_on_Students'_Writing_Anxiety_and_Performance)
- Li, K. L., & Razali, A. B. (2019). Idea sharing: Process-based approach to writing in Malaysian English education. *PASAA: Journal of Language Teaching and Learning in Thailand*, 58, 319–341.
- Maharani, A. & Santosa, M. (2021). Exploring the Implementation of Process Approach Combined with Screencast-O-Matic and Bookcreator toward. *ResearchGate; Sanata Dharma University*. <https://www.researchgate.net/publication/349665165>
- Mateos, M., Martín, E., Cuevas, I., Villalon, R., Martínez, I., & Gonzalez-Lamas, J. (2018). Improving written argumentative synthesis by teaching the integration of conflicting information from multiple sources. *Cognition and Instruction*, 36, 119–138. <https://doi.org/10.1080/07370008.2018.1425300>
- Nabhan, S. (2016). The process approach to improve students' writing ability in English Education Department University of PGRI Adi Buana Surabaya. *Jembatan Merah, Jurnal Pengajaran Bahasa Dan Sastra*, 13(June), 1–15.
- Novia, F., & Saptarina, E. (2021). Using Process Writing Approach (PWA) to Teach Writing Descriptive Text. *ResearchGate; unknown*. [https://www.researchgate.net/publication/354547015\\_Using\\_Process\\_Writing\\_Approach\\_PWA\\_to\\_Teach\\_Writing\\_Descriptive\\_Text](https://www.researchgate.net/publication/354547015_Using_Process_Writing_Approach_PWA_to_Teach_Writing_Descriptive_Text)
- Onozawa, C. (n.d.). *A Study of the Process Writing Approach -Suggestions for an Eclectic Writing Approach*. <https://core.ac.uk/download/pdf/141876629.pdf>
- Perveen, A. (2016). Synchronous and asynchronous e-language learning: A case study of Virtual University of Pakistan. *Open Praxis*, 8(1), 21-39.
- Regala-Flores, E., & Lopez, M. (2019). Self-reported summarizing and paraphrasing difficulties in L2 writing contexts: Some pedagogical interventions. *Indonesian Journal of Applied Linguistics*, 9(2), 286–296. <https://doi.org/10.17509/ijal.v9i2.20219>
- Sheir, A., Zahran, F., & Koura, A. (2015). The effectiveness of the process writing approach in developing EFL writing performance of ESP college students. *Educations Sciences Journal*, 1–23.
- Setyowati, L. & Q. M. (2017). The eight graders writing attitude toward EFL writing in Indonesian context. *International Journal of Languages' Education*, 5(3), 422– 433. <https://doi.org/10.18298/ijlet.2034>
- Tham, J. C. K. (2016). Wearable writing: Enriching student peer review with point-of-view video feedback using Google Glass. *Journal*



of Technical Writing and Communication, 1–34. <https://doi.org/10.1177/0047281616641923>

Tribble, C. (1996). *Writing*. Oxford: Oxford University Press.

Umamah, A., & Cahyono, B. Y. (2020). Indonesian university students' self-regulated writing (SRW) strategies in writing expository essays. *Indonesian Journal of Applied Linguistics*, 10(1), 25–35. <https://doi.org/10.17509/ijal.v10i1.24958>

Vikneswaran, T., & Krish, P. (2015). Utilising social networking sites to improve writing: A case study with Chinese students in Malaysia. *Technology, Pedagogy and Education*. <https://doi.org/10.1080/1475939X.2015.1030441>

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Xu, X., & Li, X. (2018). Teaching academic writing through a process-genre approach: A pedagogical exploration of an EAP program in China. *TESL-EJ*, 22(2).

Yeung, M. (2019). Exploring the strength of the process writing approach as a pedagogy for fostering learner autonomy in writing among young learners. *English Language Teaching*, 12(9), 42. <https://doi.org/10.5539/elt.v12n9p42>

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