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| Book Name: | [**New Horizons of Science, Technology and Culture**](https://bookstore.bookpi.org/product/new-horizons-of-science-technology-and-culture-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_5642** |
| Title of the Manuscript: | **A systematic literature review on contextualizing physics instruction to agriculture and related fields: insights for the Philippines** |
| Type of the Article | **Book Chapter** |

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**IOP Conf. Series: Earth and Environmental Science, 1493,** **012014, 2025.**

**Doi:10.1088/1755-1315/1493/1/012014**

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This manuscript addresses a critical gap in the literature by exploring the contextualization of physics instruction in agriculture and related fields, a topic that is often overlooked despite its potential to make physics education more meaningful and relevant. By systematically reviewing studies that integrate agricultural contexts into physics lessons, the paper highlights the limited focus on this approach and provides insights into the most frequently used agricultural contexts and physics domains. This work is particularly significant for educators, curriculum developers, and policymakers, as it demonstrates the value of using familiar, real-world contexts to enhance students' understanding and engagement with physics concepts. Moreover, the study emphasizes the need for further research in this area, particularly in the Philippines, where agriculture is a vital part of the economy and culture. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes** |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | The abstract of the manuscript provides an overview of the study's focus, methods, and key findings. However, it lacks clarity and depth in several areas, which limits its effectiveness. |  |
| **Is the manuscript scientifically, correct? Please write here.** | The manuscript appears to be scientifically correct in terms of its basic concept—contextualizing physics instruction using agricultural examples is a valid pedagogical approach. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | **No. See my comments.** |  |
| Is the language/English quality of the article suitable for scholarly communications? | No, the paper needs proofreading to eliminate grammar and syntax errors. |  |
| Optional/General comments | Thank you for submitting your manuscript, which explores the contextualization of physics instruction in agriculture and related fields. This is an important and timely topic, particularly given the emphasis on making science education relevant and meaningful for students. However, several critical areas require substantial improvement to enhance the quality and impact of the study.  Firstly, the introduction provides a general overview of contextualized learning but lacks a strong, well-structured problem statement. The authors are encouraged to clearly articulate the research gap by highlighting the limited number of studies that contextualize physics in agriculture, especially in the Philippines. Strengthening this section with recent studies from both local and international contexts will help establish the study’s relevance.  The literature review, while informative, is largely descriptive and lacks a critical synthesis of existing research. The authors should better categorize and critically evaluate the existing studies, focusing on the methodological approaches used, the types of agricultural contexts integrated, and the specific branches of physics contextualized. Moreover, the review should be expanded with more recent studies, including those beyond the Philippines, to enhance its depth. It is suggested that you use the recent western studies to enhance the intro and LR section of the present study:  Papadakis, S., Kiv, A. E., Kravtsov, H., Osadchyi, V. V., Marienko, M. V., Pinchuk, O. P., ... & Semerikov, S. O. (2023). Revolutionizing education: using computer simulation and cloud-based smart technology to facilitate successful open learning. In *Joint Proceedings of the 10th Illia O. Teplytskyi Workshop on Computer Simulation in Education, and Workshop on Cloud-based Smart Technologies for Open Education (CoSinEi and CSTOE 2022) co-located with ACNS Conference on Cloud and Immersive Technologies* (No. 3358, pp. 1-18). CEUR Workshop Proceedings.  Papadakis, S., Kiv, A. E., Kravtsov, H. M., Osadchyi, V. V., Marienko, M. V., Pinchuk, O. P., ... & Striuk, A. M. (2023). Unlocking the power of synergy: the joint force of cloud technologies and augmented reality in education. In Joint Proceedings of the 10th Workshop on Cloud Technologies in Education (CTE 2021) and 5th International Workshop on Augmented Reality in Education (AREdu 2022), Kryvyi Rih, Ukraine, May 23, 2022. CEUR Workshop Proceedings.  Zourmpakis, A. I., Kalogiannakis, M., & Papadakis, S. (2023). A review of the literature for designing and developing a framework for adaptive gamification in physics education. *The international handbook of physics education research: Teaching physics*, 5-1.  Zourmpakis, A. I., Kalogiannakis, M., & Papadakis, S. (2023). Adaptive gamification in science education: An analysis of the impact of implementation and adapted game elements on students’ motivation. *Computers*, *12*(7), 143.  In terms of methodology, the systematic review approach is appropriate, but the description lacks clarity. The authors should provide a clear PRISMA flow diagram to outline the selection process, including the number of studies identified, screened, excluded, and included. Furthermore, the criteria for study inclusion and exclusion should be clearly stated. The absence of inter-rater reliability measures also raises concerns about the consistency of the review process. It is recommended that the authors explain how consistency was maintained during the thematic analysis.  The findings section effectively categorizes the contexts of physics instruction, but the analysis is primarily descriptive, with limited critical interpretation. The authors should move beyond mere frequency counts and provide a more in-depth discussion of the implications of these findings. For instance, why is mechanics the most contextualized field, and why are other areas like modern physics rarely contextualized? Such insights will enhance the manuscript’s value.  Additionally, the discussion section should more effectively connect the findings to the existing literature, highlighting how this study advances current knowledge. The authors should also provide practical recommendations for educators and policymakers on how to enhance the contextualization of physics education in agriculture.  Finally, the manuscript requires careful proofreading to correct grammatical errors, awkward phrasing, and inconsistent terminology. Improving language clarity will significantly enhance the overall readability of the paper.  In conclusion, this manuscript addresses a valuable topic, but substantial improvements are needed in terms of literature support, methodological transparency, critical analysis, and presentation. By addressing these issues, the authors can significantly enhance the quality and contribution of their work. |  |

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| **PART 2:** | | |
|  | Reviewer’s comment | Author’s comment *(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in detail)* |  |

**Reviewer details:**

**Stamatios Papadakis, University of Crete, Greece**