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| Book Name: | [**Language, Literature and Education: Research Updates**](https://www.bookpi.org/bookstore/product/language-literature-and-education-research-updates-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_6002** |
| Title of the Manuscript: | **TEACHING SCIENTIFIC CONCEPTS USING A VIRTUAL WORLD: A CASE STUDY WITH MINECRAFT** |
| Type of the Article | **Book Chapter** |

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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 offers a valuable contribution to the scientific and educational communities by showcasing how virtual platforms like Minecraft can be strategically integrated into teaching scientific concepts. By aligning with contemporary pedagogical frameworks such as constructivism and experiential learning, the chapter demonstrates how gamification and collaborative engagement can significantly enhance student understanding and motivation. It presents compelling evidence that immersive digital environments can bridge the gap between abstract theory and practical application, especially in STEM education. The insights shared are timely and relevant, supporting educators in embracing innovative, student-centered methodologies that prepare learners for the complexities of the 21st-century world. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes! Its very suitable. |  |
| 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 is overall clear and engaging but slightly wordy in places. It could benefit from tightening and reordering to enhance flow.  Consider clarifying the research methods or outcomes slightly earlier to make the contribution more explicit upfront.  You might want to add a brief mention of data collection methods or participant count if space allows. |  |
| **Is the manuscript scientifically, correct? Please write here.** | Yes, the manuscript appears to be scientifically sound. I particularly appreciated the well-structured use of the design-based research (DBR) methodology, which was clearly articulated through the two case studies: *Simulating the Water Cycle in Minecraft* and *Teaching Electrical Circuits Using Redstone in Minecraft*.  The detailed explanation of the procedures, learning objectives, and pedagogical framework made the study accessible and easy to follow. The clear breakdown of scientific concepts—such as evaporation, condensation, precipitation, and runoff in Case Study 1—demonstrated a strong alignment between content, learning outcomes, and student engagement through collaborative gameplay. The logical flow from methodology to interpretation of findings further supports the manuscript’s scientific validity and educational value. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | The reference list already includes a strong foundation of relevant and authoritative sources spanning educational theory (e.g., Piaget, Vygotsky, Dweck), game-based learning (e.g., Squire, Schifter & Cipollone), and specific studies on Minecraft in education (e.g., Bos et al., Nebel et al., Short).  However, to strengthen the manuscript—particularly in the areas of contemporary digital pedagogy, virtual learning environments, and technology-enhanced collaborative learning (TECL)—the author may consider adding or suggesting the following references:   1. Gee, J. P. (2007). *What Video Games Have to Teach Us About Learning and Literacy.* 2nd Ed. Palgrave Macmillan. – A foundational work exploring the cognitive and learning principles embedded in video game environments. 2. Johnson-Glenberg, M. C. (2018). Embodied education in mixed and virtual reality: *Embodied cognition as a theoretical framework for learning in immersive environments.* *Educational Psychology Review*, 30(3), 603–617. – Discusses the cognitive science behind learning in immersive digital environments, useful for validating Minecraft’s educational value. 3. Winn, W. (2002). Current trends in educational technology research: *The study of learning environments.* *Educational Psychology Review*, 14(3), 331–351. – Relevant for grounding the virtual world setting in learning environment theory. 4. De Freitas, S., & Neumann, T. (2009). *The use of ‘exploratory learning’ for supporting immersive learning in virtual environments.* *Computers & Education*, 52(2), 343–352. – Supports the concept of exploratory learning, which aligns with the hands-on discovery nature of Minecraft. 5. Merchant, G., Goopy, D., & Lowrie, T. (2016). *Minecraft and mathematics: A double-edged sword for education?* *Australian Educational Researcher*, 43(4), 507–527. – Offers critical insight into both opportunities and limitations of using Minecraft in STEM contexts. |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes! It is. |  |
| Optional/General comments |  |  |

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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?** |  |  |

**Reviewer details:**

**Siham El Kafafi, Vision for Excellence International University, New Zealand**