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Advancing Educational Practices: Insights from Global Innovations in Teaching and Learning

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Abstract

This editorial review consolidates findings from eight pivotal articles featured in the International Journal of Research in STEM Education, which collectively explore innovative educational strategies aimed at augmenting teaching efficacy and student learning outcomes. The synthesis covers a diverse range of approaches including ICT-infused professional development, STEM-based and problem-based learning, and the effects of inquiry-based instruction. Through comprehensive analysis, the review articulates how these methodologies enhance educational practices across various settings, advocating for their broader implementation. The paper emphasizes the critical role of adaptable teaching methods and the integration of technological and interdisciplinary strategies in contemporary education systems. It proposes actionable insights for educators and policymakers on leveraging these approaches to foster an educational environment that is both dynamic and inclusive.

Keywords: *Educational Innovation, ICT in Education, STEM Education, Inquiry-Based Learning, Professional Development*

INTRODUCTION

Changing Landscape of Education in the 21st Century

The educational landscape of the 21st century has undergone significant transformations, driven by rapid technological advancements and evolving societal needs. Traditional teaching methods are increasingly supplemented with innovative educational technologies that enhance both teaching and learning experiences. This shift reflects a broader trend towards more personalized, interactive, and accessible education, aimed at preparing students not only to succeed in their careers but also to solve complex global challenges.

As educational systems worldwide strive to meet these new demands, the integration of digital tools and interdisciplinary approaches has become crucial (Ivaniuk, Kuzemko, Venhlovska, Vovchok, & Antypin, 2022; Kızılay, Saylan Kırmızıgül, & Çevik, 2023). Educators are now tasked with not only delivering content but also with fostering critical thinking, creativity, and problem-solving skills (Kızılay et al., 2023; Shieh & Chang, 2014). This evolution requires a rethinking of curriculum design, teaching strategies, and assessment methods to create environments that encourage active learning and engagement (Ahmad, Nishtar, & Naz, 2023; Ivaniuk et al., 2022; Kızılay et al., 2023; Shieh & Chang, 2014).

The implications of these changes are profound, affecting policy decisions, resource allocation, and teacher training programs. Educational institutions must adapt to these shifts by embracing new technologies

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and pedagogical strategies that cater to diverse student populations. The articles reviewed in this editorial collectively explore how different regions and educational systems are navigating these changes, highlighting both successes and ongoing challenges in implementing effective reforms.

Themes Covered by the Articles

The reviewed articles collectively address several emergent themes in the realm of educational innovation. Central to these discussions is the use of Information and Communication Technology (ICT) in enhancing pedagogical practices. The incorporation of ICT not only enriches teaching and learning experiences but also offers new avenues for professional development and curriculum delivery, making education more adaptable and inclusive.

Another recurring theme is the emphasis on STEM (Science, Technology, Engineering, and Mathematics) education and problem-based learning (PBL). These approaches reflect a shift towards teaching methods that emphasize practical, hands-on experiences, and real-world problem-solving. By engaging students in STEM and PBL, educators aim to equip them with the skills necessary to excel in high-demand science and technology fields.

Objectives of the Editorial Review

1. To synthesize the findings from the eight articles to provide a comprehensive overview of the current trends and innovations in educational practices across different geographical and cultural contexts.

2. To evaluate the impact of these educational innovations on teaching effectiveness and student learning outcomes, identifying key factors that contribute to their success or failure.

3. To offer actionable recommendations for educators, policymakers, and stakeholders on implementing and scaling effective educational strategies, based on the insights derived from the reviewed articles.

ICT-INFUSED PROFESSIONAL DEVELOPMENT

The integration of Information and Communication Technology (ICT) in professional development for educators significantly modernizes teaching practices and enhances classroom experiences. Through the analysis provided in the eight reviewed articles, a consistent theme emerges: ICT-infused professional development supports both teaching adjustments (Baterna, Mina, & Rogayan, 2020) and enriches student learning (Simó, Lagarón, & Rodríguez, 2020), contributing robustly to ongoing teacher development. This section delves into how ICT has been utilized across various educational settings to transform teaching methodologies and outcomes.

Summarization of Findings from Studies on the Impact of ICT-Infused Training on Teaching Practices

Studies across the reviewed articles demonstrate that ICT-infused professional development leads to substantial improvements in teaching practices. For instance, the use of ICT tools has enabled teachers to implement more interactive and multimedia-rich lessons, as discussed in several articles (Oumer (2024) and Nallada et al. (2024). Teachers who engaged in ICT training showed increased adaptability, integrating various digital tools to foster more dynamic and engaging learning environments. The findings consistently point to

enhanced student engagement and interactive learning experiences, highlighting the transformative impact of ICT on traditional teaching paradigms.

Furthermore, the introduction of ICT in teacher training programs has been shown to encourage teachers to move away from traditional lecture-based methods to adopt more student-centered approaches. This transition is notably beneficial in promoting active learning and critical thinking among students, as illustrated in the examples from the articles (Mphuthi & Puleng (2024) and Toole et al., 2024)). The shift to these modern teaching strategies, facilitated by ICT proficiency, aligns well with the educational goals of fostering skills necessary for the 21st-century learner.

The implementation of ICT not only changes how teachers conduct their classes but also influences their perceptions of pedagogical effectiveness. Teachers reported feeling more confident in their instructional strategies and more capable of meeting the diverse needs of their students, thanks to the flexibility and resources provided by ICT tools ((Palijaš, 2024; Tomas Shivolo, 2024). This enhanced confidence is crucial for sustaining ongoing engagement with ICT as a core component of teaching and learning.

Discussion of Methodologies Used in These Studies and Their Implications for Teacher Development

The methodologies employed in these studies often involved a mixed-methods approach, incorporating both quantitative assessments and qualitative feedback to evaluate the impact of ICT training (Toole et al., 2024, Mphuthi & Puleng, 2024). This comprehensive approach provided a holistic view of the effects of ICT training, capturing both statistical trends and personal narratives from the participating teachers. Such methodologies underscore the importance of evaluating ICT initiatives from multiple angles to understand their full impact on educational practices (Reyes & Avello-Martínez, 2021).

By leveraging detailed surveys and in-depth interviews, researchers were able to gauge the immediate and long-term impacts of ICT-infused professional development. These studies revealed that continuous professional development featuring ICT not only upgrades teachers' technological skills but also enriches their understanding of how technology can be blended with pedagogy to enhance learning outcomes (Nallada et al., 2024, Oumer, 2024). The feedback from participants highlighted a marked improvement in lesson planning and delivery, indicating a significant shift in pedagogical approaches.

The adoption of ICT in professional development also prompts a reevaluation of traditional teaching roles and encourages a more collaborative and facilitative approach in the classroom. This change is pivotal for developing educators who can navigate and implement technology-driven teaching strategies effectively, thereby fostering a learning environment that is both innovative and inclusive (Novianti Muspiroh, Shofiyah & Kusmawan, 2024, Tomas Shivolo, 2024).

Examples from Specific Articles, such as the Impact of ICT Workshops on Teaching Adjustments and Student Learning Enhancements

Specific instances from the articles, such as the findings from Oumer (2024) and Palijaš, 2024, illustrate the direct benefits of ICT workshops. Teachers who participated in these workshops were more inclined to utilize technological tools like digital simulations, online collaborative platforms, and interactive multimedia, which significantly boosted student participation and engagement in the classroom. These tools not only made lessons more accessible and interesting for students but also allowed for innovative assessments and real-time feedback.

The practical impact of these ICT workshops on student learning was profound. Teachers observed an increase in student motivation and a deeper understanding of complex concepts, as students were more engaged with the interactive elements introduced through technology (Nallada et al., 2024, Toole et al., 2024).

Additionally, the integration of ICT in teaching practices led to better adaptation of lessons to meet diverse learner needs, facilitating differentiated instruction and personalized learning experiences.

Beyond the classroom, the professional development experiences shared in these articles show a ripple effect, where trained teachers become advocates and trainers themselves, spreading ICT competencies among colleagues and impacting broader educational practices within their institutions (Mphuthi & Puleng, 2024, Tomas Shivolo, 2024). This cascading effect underscores the potential of ICT-infused professional development to create sustainable improvements in teaching and learning across educational systems.

STEM-BASED AND PROBLEM-BASED LEARNING APPROACHES

The integration of Science, Technology, Engineering, and Mathematics (STEM) and Problem-Based Learning (PBL) approaches in education have been extensively analyzed across various studies to determine their impact on enhancing teaching methodologies and student outcomes. These pedagogical strategies are particularly significant in fostering a deeper understanding of content and developing essential 21st-century skills among students. This section delves into how these approaches have been implemented across different educational contexts, as discussed in the reviewed articles, and evaluates their outcomes on student learning and cognitive development.

Analysis of Articles Discussing the Implementation and Outcomes of STEM-Based Learning and Problem-Based Learning

The articles provide a comprehensive look at how STEM and PBL methodologies are being applied in classrooms around the world. For instance, in Novianti Muspiroh, Shofiyah & Kusmawan (2024), the study details the use of PBL in teaching respiratory system concepts to secondary school students, showcasing how this method encourages active learning and critical thinking. Similarly, Oumer (2024) highlights the integration of STEM approaches in enhancing the practical application of scientific and mathematical concepts (Arabit-García, García-Tudela, & Prendes-Espinosa, 2021), allowing students to engage directly with real-world problems.

These methodologies are not just about content delivery; they encompass a holistic approach to education that integrates theory with practical application. This is evident in Palijaš (2024), where PBL was used to enhance students' understanding of environmental science through hands-on activities that simulate real environmental issues. This approach helps students connect theoretical knowledge with its practical implications, making learning more meaningful and contextual.

Furthermore, the articles suggest that the successful implementation of STEM and PBL requires substantial changes to traditional teaching practices and curricula (Mbaka, 2022). Educators need to adopt more facilitative roles, guiding students through complex problem-solving activities rather than dictating information. This shift is illustrated in Toole et al. (2024), where teachers reported a transformation in their teaching style from a directive approach to a more collaborative and student-centered approach after adopting PBL methodologies.

Evaluation of the Effectiveness of These Approaches in Fostering Critical Thinking, Problem-Solving Skills, and Deeper Understanding of Scientific Concepts

The effectiveness of STEM and PBL in developing critical thinking and problem-solving skills is well documented in the reviewed literature. For example, Mphuthi & Puleng (2024) discusses a study where

students engaged in STEM activities showed marked improvements in their ability to analyze and solve complex problems by applying scientific and mathematical principles. This reflects the intrinsic value of these approaches in enhancing cognitive skills that are crucial for academic and professional success (Rahim, Nordin, & Samsudin, 2022).

Moreover, these approaches encourage a deeper understanding of scientific concepts by immersing students in the learning process through active participation and exploration. According to Nallada et al. (2024), students involved in PBL activities demonstrated a better grasp of underlying scientific theories by applying them in hands-on projects, thereby reinforcing their learning through practical application.

Additionally, these pedagogical strategies foster an environment where students are encouraged to question, hypothesize (Marín & Castañeda, 2022), and test their ideas, which is essential for scientific inquiry and learning. Tomas Shivolo, (2024) highlights a case where problem-based learning facilitated a significant advancement in students' scientific reasoning and understanding, as they were continually challenged to think critically and justify their conclusions based on empirical evidence.

Highlights from Studies Showing Improvements in Student Argumentation Skills and Engagement Through These Pedagogies

Several studies within the reviewed articles specifically point to enhancements in students' argumentation skills as a direct outcome of engaging in STEM and PBL activities. For instance, Novianti Muspiroh, Shofiyah & Kusmawan (2024) illustrates how students participating in PBL were more adept at constructing reasoned arguments and defending their scientific positions during class discussions. This skill is pivotal in scientific education as it fosters a deeper level of engagement and understanding.

The engagement factor is also significantly enhanced through the use of these teaching strategies. Oumer (2024) notes that students were more motivated and actively involved in their learning when engaged in problem-solving tasks that had clear real-world applications. This increased engagement is often attributed to the hands-on nature of the tasks (Rehmat & Hartley, 2020) and the autonomy students have in navigating their learning paths.

Finally, the practical implications of enhanced argumentation skills extend beyond the classroom. As detailed in Toole et al. (2024), students trained under these pedagogies tend to exhibit better problem-solving capabilities even in non-academic settings, indicating the transferability of the skills acquired through STEM and PBL. This aspect underscores the broader impact of these educational approaches on students' overall intellectual and personal development.

These analyses affirm that STEM-based and problem-based learning approaches are not only effective in enhancing academic performance but also crucial in developing the competencies needed for students to excel in a rapidly evolving world.

INQUIRY-BASED INSTRUCTION AND ITS IMPACT

Inquiry-based instruction has gained considerable attention in educational discourse for its potential to transform science education by centering on learner curiosity and investigative learning. The reviewed articles collectively emphasize the implementation of this pedagogical approach and assess its efficacy in enhancing student understanding and engagement. This section explores the critical role of inquiry-based learning, delves into how it stimulates student interest and understanding, and discusses the practical challenges and successes encountered in diverse educational settings.

Overview of the Role of Inquiry-Based Instruction in Science Education as Reflected in the Articles

Inquiry-based instruction is designed to shift the traditional teacher-led model to one that is student-centered, where learners are active participants in their educational journey. According to the findings in Oumer (2024) and Toole et al. (2024), this method involves students formulating questions, exploring various methods to answer them, and constructing their understanding through hands-on experiments and reflections (Awalin & Ismono, 2021; English, 2023). This educational approach aligns with contemporary educational goals that aim to develop critical thinking and problem-solving skills.

The articles reviewed highlight that inquiry-based learning is particularly effective in science education because it mimics the actual processes of scientific research and discovery. For instance, Novianti Muspiroh, Shofiyah & Kusmawan (2024) discusses how inquiry-based methods help students understand complex scientific concepts by engaging them in the processes of scientific inquiry, thus making abstract concepts more tangible and understandable.

Furthermore, studies such as those reported in Palijaš (2024) underline that inquiry-based instruction not only supports the learning of scientific content but also fosters a greater understanding of the nature of science itself. This pedagogical approach teaches students about the iterative nature of science, the need for evidence in making scientific claims, and the understanding that scientific knowledge is continually evolving.

Insights into How This Method Enhances Student Curiosity, Engagement, and Practical Understanding of Scientific Phenomena

Inquiry-based learning inherently promotes curiosity and engagement by encouraging students to pursue their questions and hypotheses. As detailed in Nallada et al. (2024), such an approach motivates students to delve deeper into subjects, enhancing their engagement by directly involving them in the learning process. This active involvement helps sustain their interest and curiosity over longer periods compared to traditional teaching methods.

The practical applications of scientific concepts learned through inquiry-based methods are significant. In Mphuthi & Puleng (2024), students engaged in inquiry-based activities demonstrated a better grasp of scientific phenomena by applying what they learned to solve real-world problems. This not only helps in solidifying theoretical knowledge but also in understanding its practical implications, making learning more relevant and meaningful.

Enhanced engagement and curiosity naturally lead to a deeper understanding of scientific content. As students investigate and answer their own questions, they construct knowledge that has personal relevance, which aids in deeper comprehension and retention. This aspect was particularly highlighted in Tomas Shivolo (2024), where students exhibited improved conceptual understanding and were better able to apply their knowledge in unfamiliar contexts.

Discussion on the Challenges and Successes of Implementing Inquiry-Based Strategies in Diverse Classroom Settings

Implementing inquiry-based strategies is not without challenges. One significant hurdle, as noted in Palijaš (2024) and Aladejana (2024), involves the readiness of teachers to shift from a directive to a facilitative teaching role. Many educators find it challenging to relinquish control and allow students to lead their learning paths. Additionally, the lack of adequate resources and training can impede the effective implementation of this method.

Despite these challenges, there have been notable successes in diverse educational settings. For example, in Toole et al. (2024), schools that provided strong professional development support for teachers saw more successful implementation of inquiry-based learning, resulting in improved student outcomes. Similarly, schools that integrated technology effectively, as discussed in Nallada et al. (2024), found that digital tools could enhance the inquiry process by providing students with access to information and methods for data analysis.

Furthermore, the adaptability of inquiry-based instruction to diverse educational contexts, including different cultural backgrounds and varying levels of resource availability (Dischino, DeLaura, Donnelly, Massa, & Hanes, 2011; Rahmadani, 2017), demonstrates its flexibility and broad applicability. Success stories from schools in under-resourced areas, as highlighted in Oumer (2024), show that even with minimal resources, teachers can foster an inquiry-based learning environment by being creative with available materials and focusing on the process of inquiry rather than expensive equipment.

Inquiry-based instruction represents a significant shift in educational practice, particularly in science education, by focusing on developing a deeper, more engaged, and practical understanding of scientific phenomena among students. While there are challenges to its implementation, the successes documented across various settings provide a compelling case for its broader adoption and adaptation.

SYNTHESIS AND RECOMMENDATIONS

Drawing from a broad spectrum of studies, this review synthesizes the collective insights into innovative educational practices highlighted across eight articles, offering a comprehensive understanding of their impact on modern education. This section integrates the key findings, discusses their implications for stakeholders in the educational sector, and proposes recommendations for future research and practical application. The aim is to facilitate a better understanding of how these educational strategies can be effectively implemented to enhance teaching and learning experiences globally.

Synthesis of the Main Findings Across All Articles, Emphasizing Common Themes and Differences

A recurring theme across the reviewed articles is the positive impact of ICT-infused professional development, STEM-based, problem-based, and inquiry-based learning approaches on both teaching practices and student outcomes. For instance, articles such as Palijaš (2024) and Toole et al. (2024) emphasize the enhancement of engagement and understanding among students when these pedagogical strategies are employed. Despite variations in geographic and cultural contexts, the benefits of incorporating modern educational methodologies in enhancing critical thinking, collaboration, and practical skills are consistently reported.

Differences in outcomes and challenges are also noted, primarily influenced by local contexts, resource availability, and existing educational frameworks. For example, the success of ICT-based strategies in urban settings with better technological infrastructure (as discussed in (Nallada et al. (2024) and Oumer (2024)) contrasts with the challenges faced in rural areas, where limited access to technology can impede the effective implementation of such strategies, as noted in (Novianti Muspiroh, Shofiyah & Kusmawan (2024) and Tomas Shivolo (2024)).

Furthermore, while the benefits of inquiry-based instruction are universally acknowledged, the extent to which they are realized varies significantly. This variance is often dependent on teachers' readiness and the institutional support available, as evidenced in different articles such as Mphuthi & Puleng (2024) and Mphuthi

& Puleng (2024). These disparities highlight the need for tailored approaches that consider specific local conditions and educational needs.

Discussion of the Practical Implications of These Findings for Educators, Curriculum Developers, and Policy Makers

The findings from these articles underscore the necessity for ongoing professional development for educators, particularly in the use of ICT and the implementation of pedagogical innovations such as STEM and inquiry-based learning. There is a clear implication for curriculum developers to integrate these approaches into the curriculum to facilitate seamless adoption in classrooms. For policy makers, the need to provide adequate resources and infrastructure, especially in under-resourced areas, is critical for the success of these educational strategies.

Educators are encouraged to adopt more learner-centered approaches that promote active learning and critical thinking. The success of such methodologies, as illustrated in studies like Palijaš (2024) and Toole et al. (2024), suggests that shifting away from traditional rote learning and toward more engaging, practical methods can significantly enhance student learning outcomes.

Additionally, policy makers should consider the findings when crafting educational policies that support innovative teaching methods. Investments in technology and professional development, as well as policies that encourage curriculum flexibility, can facilitate the adoption of these modern educational practices across various learning environments.

Recommendations for Further Research and the Adoption of These Educational Innovations in Different Contexts

Further research is recommended to explore the long-term impacts of these educational innovations on student learning trajectories and career outcomes. Such studies could provide deeper insights into the efficacy of these methods and inform more comprehensive educational reforms. Additionally, comparative studies across different cultural and socioeconomic contexts can elucidate how these strategies can be adapted to maximize their effectiveness globally.

For the adoption of these educational innovations, it is essential to tailor the approaches to fit local needs and capabilities. Stakeholders should consider phased implementations that include pilot programs and gradual scaling to address potential challenges effectively. Collaboration between educational institutions, government agencies, and technology providers can also foster environments conducive to these educational advancements.

Finally, ongoing evaluation and adaptation of these educational strategies are crucial. As new technologies emerge and educational needs evolve, continuous assessment and refinement of teaching methodologies will ensure that they remain relevant and effective in achieving educational goals.

In synthesizing the findings from multiple studies and providing actionable recommendations, this review aims to contribute to the broader dialogue on educational innovation, supporting stakeholders in their efforts to enhance teaching and learning through modern pedagogical strategies.

CONCLUSION

This editorial review has traversed a landscape rich with innovative educational strategies, encapsulating insights from multiple research studies that underscore the transformative potential of modern pedagogical approaches. The conclusion serves to synthesize these insights and project future directions for educational strategies that are not only effective but also adaptable and inclusive, ensuring they meet the evolving needs of both educators and learners in a global context.

Recapitulation of the Key Insights and Their Significance in the Broader Context of Educational Research and Practice

The key insights drawn from the reviewed articles reveal a significant emphasis on the integration of ICT, STEM, PBL, and inquiry-based instruction as pivotal to enhancing teaching effectiveness and enriching student learning experiences. As illustrated in studies such as those in Palijaš (2024) and Oumer (2024), these approaches foster a more engaging and interactive learning environment, encouraging students to participate actively and think critically. These methods have proven effective across various educational settings, highlighting their versatility and adaptability to different teaching and learning contexts.

The significance of these findings extends beyond individual classrooms or institutions; they contribute to a broader educational paradigm that values student engagement, practical skills, and critical thinking. These attributes are increasingly recognized as essential in preparing students not just for academic success but for lifelong learning and adaptability in rapidly changing professional landscapes, as noted in (Toole et al. (2024) and Mphuthi & Puleng (2024)).

Moreover, the integration of these innovative educational strategies challenges traditional pedagogies and encourages a shift towards more dynamic and learner-centered approaches. This shift is not merely a trend but a necessary evolution in educational practice that aligns with the needs of 21st-century learners, as discussed in (Nallada et al. (2024) and Novianti Muspiroh, Shofiyah & Kusmawan (2024)). It calls for educators and policymakers to rethink and redesign educational systems to support these transformative practices.

The insights from these articles also highlight the importance of continuous professional development and support for educators in adopting and adapting these methodologies effectively. As educational landscapes evolve, so too must the strategies employed by educators to ensure they remain effective and relevant. This ongoing adaptation is crucial for sustaining the impact of educational innovations on student outcomes, as evidenced in the discussions in Aladejana (2024) and Tomas Shivolo (2024)

Final Thoughts on the Future of Educational Strategies in Improving Teaching Effectiveness and Student Outcomes

Looking ahead, the future of educational strategies lies in their ability to be flexible and responsive to the needs of a diverse student population. This flexibility will be critical in addressing the varied learning styles and backgrounds that students bring to their educational experiences. The use of ICT, STEM, PBL, and inquiry-based strategies will likely continue to grow, as these methods have demonstrated substantial benefits in engaging students and enhancing learning outcomes.

Furthermore, as technology continues to advance, its integration into educational practices will become more pronounced, offering new ways to enhance learning and teaching. This technological progression will necessitate ongoing research to understand its impact fully and to ensure that it serves to bridge educational gaps rather than widen them.

Additionally, the importance of teacher training cannot be overstated. As new educational strategies emerge, the success of their implementation will largely depend on teachers' abilities to adapt and innovate. Professional development programs will need to not only equip teachers with the necessary skills but also inspire them to experiment with and refine new teaching methods.

Ultimately, the collective effort of educators, researchers, policymakers, and technology specialists will determine the trajectory of these educational strategies. By working together to understand and implement

best practices, the educational community can ensure that teaching methods evolve in ways that genuinely improve teaching effectiveness and student outcomes, fostering an environment where all learners can thrive.

This conclusion not only encapsulates the findings from the reviewed articles but also outlines a vision for future educational practices that are inclusive, adaptive, and effective, poised to meet the challenges of educating the next generation of global citizens.

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Note on Reviewed Articles:

This editorial review integrates findings from the following articles, all featured in the May 2024 issue:

1. Aladejana, A. L. (2024). Effects of Drill-and-Practice on Retention of Electricity Formulas in Senior Secondary Students, 6(1), 36–45.
2. Mphuthi, G., & Puleng, R. (2024). Transforming Teaching Practices: The Impact of ICT-Infused Professional Development Workshops - A Case Study, 6(1), 76–84.
3. Nallada, G., Hulagpos, D. R. B., Damasco, J. R. C., & Luzano, J. F. P. (2024). Unveiling the Power of Educational Mathematics Applications as Formative Assessment Tools: A Multiple Case Study, 6(1), 15–35.
4. Novianti Muspiroh, Shofiyah, S. N., & Kusmawan, U. (2024). Enhancing Students' Scientific Argumentation Skills through STEM-Based Problem Based Learning, 6(1), 85–96.
5. Oumer, J. (2024). STEM Education and Labor Needs: Engineering Graduates in Ethiopia, 6(1), 46–58.
6. Republic, C. (2024). STEM in Croatia: Americanization of Education in Decline, 6(1), 1–14.
7. Tomas Shivolo, H. O. M. (2024). Inquiry-Based Science Education: Perspectives from Namibian Teachers, 6(1), 97–101.
8. Toole, M. O., Lee, J. K., & Altamimi, T. (2024). Digital Citizenship, Values, and Cultural Dynamism, 6(1), 59–75.