

Empowering Edupreneurship through AI-Based Creative Journalism Education

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ABSTRACT

The advancement of Artificial Intelligence (AI) has reshaped journalism and education, creating opportunities to strengthen creative writing and entrepreneurial skills. AI-driven journalism platforms, such as automated content generation and real-time feedback, empower students to become both skilled writers and edupreneurs, while developing 21st-century competencies including creativity, critical thinking, collaboration, and digital literacy. This study examines the influence of AI integration on creative writing skills, edupreneurship, and competency development using a **quantitative research design**. Data were collected through structured questionnaires distributed to university students and analyzed with **Partial Least Squares Structural Equation Modeling (PLS-SEM)** via SmartPLS 4. The **analysis revealed** high reliability and convergent validity of the measurement model, with structural results confirming significant positive relationships between AI integration and creative writing skills, and between creative writing skills and 21st-century competencies. Furthermore, **creative writing** was shown to mediate the connection between AI adoption and both entrepreneurship and competency development, indicating its key role in linking technological tools with educational and entrepreneurial outcomes. The **findings** underline the transformative role of AI in journalism education, not only in enhancing writing proficiency but also in building entrepreneurial capacity and essential future-ready skills. This **research provides** practical implications for integrating AI literacy, creative expression, and entrepreneurship into curricula, while also aligning with **Sustainable Development Goals (SDGs)** such as Quality Education, Economic Growth, Innovation, and Global Partnerships, supporting inclusive and technology-driven learning.

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1. INTRODUCTION

The rapid evolution of technology in the 21st century has dramatically transformed the way knowledge is produced, communicated, and consumed [1]. In this era, education must go beyond rote learning and static content delivery, it must embrace dynamic tools that promote innovation, critical thinking, and entrepreneurial

mindsets [2]. Journalism education, in particular, is experiencing a paradigm shift from traditional media training to the cultivation of digital-native communicators who can navigate complex technological landscapes and create meaningful narratives across platforms [3]. At the core of journalism lies creative writing, a skill that not only enhances communication but also serves as a gateway to broader cognitive development [4]. When combined with entrepreneurial thinking namely edupreneurship and creativepreneurship creative writing transforms into a strategic tool for value creation [5]. Students are no longer limited to being passive content recipients instead, they can become knowledge producers capable of publishing, monetizing, and scaling their ideas into market-ready educational products such as enrichment books, digital articles, or multimedia storytelling [6].

The integration of Artificial Intelligence (AI) into journalism platforms provides new pathways for developing these competencies [7]. AI tools such as natural language generation, predictive text, automated editing, and data-driven storytelling engines are not only enhancing writing efficiency but also enabling personalized learning, instant feedback, and scalable content development [8]. These technologies can democratize access to writing support and elevate the quality of journalism training, especially when embedded within educational contexts [9]. However, the adoption of AI in journalism education is still uneven, particularly in contexts where technological literacy and educational infrastructure remain limited [10]. There is a need to investigate how AI-enhanced platforms can empower learners not just as writers, but as edupreneurs who create, adapt, and commercialize content in ways that align with 21st-century demands [11]. This study seeks to explore the role of AI-driven journalism platforms in enhancing creative writing and fostering edupreneurship among students. It emphasizes the development of creative writing enrichment books as tangible outputs that blend writing, technology, and entrepreneurship [12]. The goal is to provide an interdisciplinary model that leverages AI to cultivate critical 21st-century competencies [13].

This research also aligns with several Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) by promoting inclusive, technology-enhanced learning; SDG 8 (Decent Work and Economic Growth) by nurturing entrepreneurial skillsets; and SDG 9 (Industry, Innovation, and Infrastructure) through the integration of advanced technologies in education. Furthermore, it supports SDG 17 (Partnerships for the Goals) by fostering collaboration among educational institutions, technology developers, and creative industries. Through this lens, the study not only contributes to the discourse on educational innovation but also supports global efforts toward sustainable and inclusive development.

2. LITERATURE REVIEW

2.1. Edupreneurship and Creativepreneurship in the Digital Age

Edupreneurship represents a transformative approach in modern education, encouraging learners to become creators of educational content and services [14]. It promotes autonomy, innovation, and digital literacy, enabling students to transform their skills into meaningful entrepreneurial outputs [15]. Similarly, creativepreneurship emphasizes creativity as the foundation for business development, particularly in fields like journalism, where storytelling and audience engagement are essential [16]. These models shift students from being passive consumers of knowledge to active producers who can contribute to the digital economy [17].

2.2. Creative Writing in Journalism Education

Creative writing plays a central role in journalism by allowing students to develop a narrative voice that is engaging, empathetic, and impactful. It enhances not only communication skills but also cognitive and emotional development [18]. Within journalism education, creative writing enables learners to explore diverse perspectives, experiment with storytelling techniques, and communicate complex ideas with clarity [19]. However, traditional methods of teaching writing often fail to stimulate innovation, relying on repetitive exercises and delayed feedback that limit student growth [20].

2.3. Artificial Intelligence in Journalism and Learning

Artificial Intelligence is revolutionizing journalism through automation and intelligent content generation [21]. In journalistic practice, AI tools can generate article drafts, suggest stylistic improvements, analyze sentiment, and support fact-checking processes [22]. In educational settings, these tools provide real-time writing assistance, adaptive learning environments, and instant feedback that fosters individual growth [23]. When integrated thoughtfully, AI can support the development of writing fluency, enhance engagement, and build student confidence in content creation [24]. The use of AI also helps democratize access to writing resources, making it possible for learners from diverse backgrounds to receive personalized support [25].

2.4. 21st-Century Skills and Educational Transformation

The development of 21st-century competencies, including critical thinking, creativity, collaboration, communication, and digital literacy, is a core objective of modern education [26]. These competencies prepare learners not only for academic success but also for adaptive participation in the global digital economy [27]. Educational transformation requires tools and pedagogies that go beyond content delivery, empowering students to solve real-world problems, innovate, and communicate effectively across digital platforms [28]. AI-enhanced learning tools align well with these objectives by enabling students to engage in deeper, more reflective learning [29]. Combined with entrepreneurial projects such as developing enrichment books or multimedia storytelling learners can apply their skills in meaningful, practical contexts [30]. This combination fosters both academic and professional readiness in a rapidly evolving digital landscape [31].

2.5. Identified Gaps and Study Focus

Despite the growing presence of AI in both education and journalism, few educational frameworks address the integration of AI to simultaneously promote creative writing, entrepreneurship, and 21st-century skills [32]. The production of creative writing enrichment books using AI platforms remains underexplored, especially as a means of fostering entrepreneurial output [33]. This study seeks to address these gaps by presenting a model that leverages AI-based journalism tools to empower students in writing and content innovation, ultimately contributing to both personal development and sustainable educational practices [34].

3. METHODOLOGY

This research adopts a quantitative research design to explore the impact of AI-driven journalism platforms on creative writing and entrepreneurship empowerment [35]. The study aims to analyze the relationships between various constructs such as AI integration, creative writing skills, entrepreneurship, and 21st-century competencies among students [36]. The primary tool used for statistical analysis is SmartPLS 4, a Partial Least Squares Structural Equation Modeling (PLS-SEM) software, which is particularly suitable for exploring complex models with multiple variables and interactions [37].

The choice of SmartPLS 4 is driven by its ability to handle both reflective and formative measurement models, allowing for comprehensive analysis of the direct and indirect effects between constructs [38]. Given the relatively new and complex nature of the research topic, SmartPLS 4 offers a robust platform to assess the validity and reliability of the proposed model while managing data from multiple sources [39]. The software also facilitates the examination of path coefficients, R-squared values, and model fit indices, which are essential for understanding the strength and significance of the relationships between the variables [40].

3.1. Research Design

This research adopts a quantitative research design with a descriptive correlational approach. The primary goal is to investigate the relationships between AI integration in journalism platforms, creative writing skills, entrepreneurship, and 21st-century competencies among students using AI-driven journalism tools. The quantitative approach allows for an objective and measurable examination of the impact of AI tools on writing and entrepreneurial skill development [41].

3.2. Population and Sample

The target population for this study consists of university students enrolled in journalism and digital media programs who have access to AI-based writing platforms [42]. The study sample will be selected using convenience sampling, where participants are selected based on their availability and willingness to engage in the research [43]. A minimum of 200 students will be targeted to ensure the robustness and reliability of the data.

3.3. Data Analysis

The data will be analyzed using SmartPLS 4, a Partial Least Squares Structural Equation Modelling (PLS-SEM) tool, to assess the relationships between the study variables [44]. PLS-SEM is particularly suitable for this research because it allows for the modelling of complex relationships between multiple constructs and variables, even with small sample sizes [45]. SmartPLS 4 provides a comprehensive analysis of both the measurement model (to assess the validity and reliability of the indicators) and the structural model (to evaluate the hypotheses and relationships between the latent variables).

3.4. Variable and Hypothesis

AI Integration in Journalism Platforms (AI) refers to the use of artificial intelligence tools in journalism platforms to support students in creative writing and content creation. It is measured through indicators such as AI tools accessibility, which assesses the availability and ease of use of writing tools like grammar checkers and content generators, personalized learning support that reflects how AI platforms provide tailored feedback and suggestions to enhance writing skills, AI-driven feedback that gauges the real-time assistance in improving writing style and structure, and AI content generation, which helps in drafting articles, constructing sentences, and generating ideas. Creative Writing Skills (CWS) represent students' ability to create original, engaging content, evaluated through writing fluency, creativity, writing structure and organization, and engagement with the audience. Edupreneurship (EP) refers to the capacity to use creative writing and AI skills to develop content-based ventures, with indicators such as business model development, marketability of content, an entrepreneurial mindset focused on scalability and innovation, and digital marketing awareness to promote and distribute content. Lastly, 21st-Century Competencies (21CC) encompass essential skills for modern success, including critical thinking, digital literacy, collaboration, and creative problem solving, which are key for evaluating content, using digital tools effectively, working collaboratively, and approaching challenges with innovative solutions.

The following hypotheses will be tested:

1. H1: AI Integration in Journalism Platforms (AI) positively impacts Creative Writing Skills (CWS).
2. H2: Creative Writing Skills (CWS) positively influence Edupreneurship (EP).
3. H3: AI Integration in Journalism Platforms (AI) positively impacts Edupreneurship (EP).
4. H4: AI Integration in Journalism Platforms (AI) positively impacts 21st-Century Competencies (21CC).
5. H5: Creative Writing Skills (CWS) positively impact 21st-Century Competencies (21CC).
6. H6: Edupreneurship (EP) positively influences 21st-Century Competencies (21CC).

SmartPLS 4 will be used to calculate the path coefficients for each hypothesis, which will indicate the strength and direction of the relationships between variables. Additionally, R-squared values will be calculated to assess the explanatory power of the model, and bootstrapping will be conducted to evaluate the statistical significance of the path coefficients.

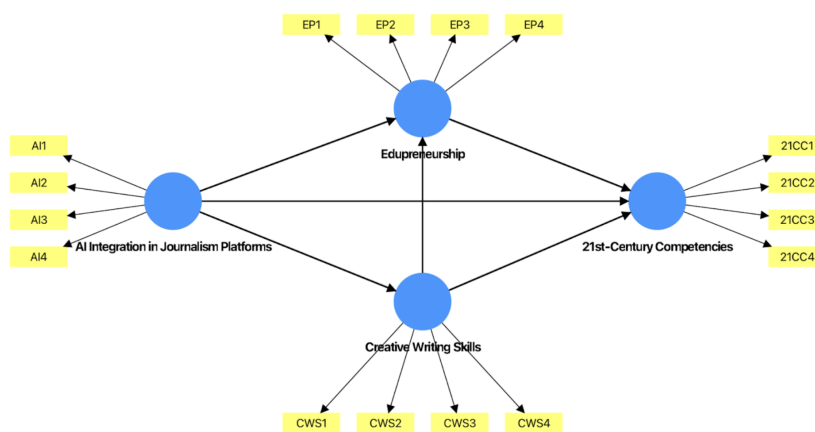


Figure 1. Hypothesis Framework

The research framework presented in figure 1 outlines the hypothesized relationships between key constructs, including AI Integration in Journalism Platforms, Creative Writing Skills, Edupreneurship, and 21st-Century Competencies. AI Integration, represented by indicators such as AI tools accessibility (AI1), personalized learning support (AI2), AI-driven feedback (AI3), and content generation (AI4), is hypothesized to positively impact both Creative Writing Skills (CWS) and Edupreneurship (EP). Creative Writing Skills, indicated by writing fluency (CWS1), creativity (CWS2), structure (CWS3), and audience engagement (CWS4),

are expected to influence the development of Edupreneurship and enhance 21st-Century Competencies, including critical thinking (21CC1), digital literacy (21CC2), collaboration (21CC3), and creative problem-solving (21CC4). The framework highlights the dynamic and interconnected role of AI in fostering creative and entrepreneurial skills while simultaneously developing essential competencies for success in the modern workforce.

4. RESULT AND DISCUSSION

The analysis of data collected from respondents provides important insights into the relationships between AI Integration in Journalism Platforms, Creative Writing Skills, Edupreneurship, and 21st-Century Competencies [46]. Consistent with the literature review, the findings suggest that the incorporation of AI tools ranging from content generators to realtime feedback systems has a notable influence on students' ability to produce creative, structured, and engaging written work [47]. This improvement in creative writing skills appears to be a catalyst for fostering an entrepreneurial mindset, enabling students to identify market opportunities for their content and apply digital marketing strategies effectively. Moreover, the results indicate that both enhanced writing skills and entrepreneurial capabilities contribute meaningfully to the development of critical 21st-century competencies, such as digital literacy, collaboration, and creative problem solving, reinforcing the theoretical framework established in the earlier sections of this study [48].

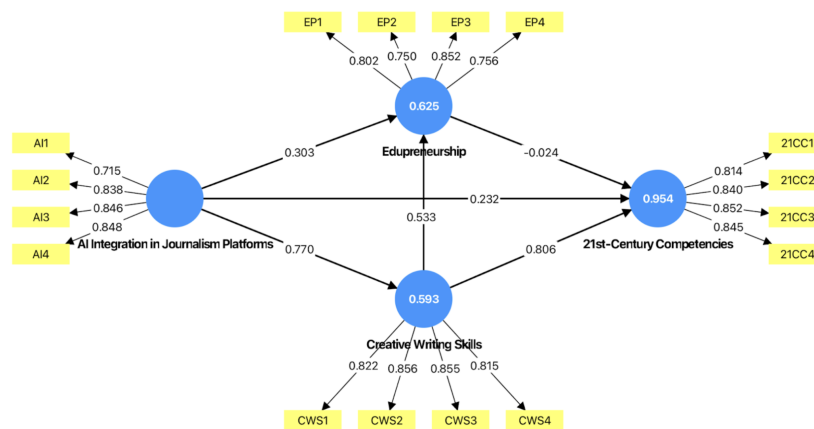


Figure 2. SmartPLS-SEM

The results presented in figure 2 illustrate the structural model analysis using SmartPLS, showing the path coefficients, indicator loadings, and R-squared values for each construct [49]. The R-squared values indicate that AI Integration in Journalism Platforms explains 59.3% of the variance in Creative Writing Skills, 62.5% in Edupreneurship, and 95.4% in 21st-Century Competencies, highlighting the strong predictive capability of the model. All indicator loadings exceed 0.70, suggesting high convergent validity, with the highest loadings observed for AI3 (0.846) and EP3 (0.852), reflecting strong representation of these indicators in their respective constructs. The path coefficient from AI Integration to Creative Writing Skills (0.770) and from Creative Writing Skills to 21st-Century Competencies (0.806) show substantial positive relationships, while the direct path from Edupreneurship to 21st-Century Competencies (-0.024) appears negligible. These findings emphasize that AI-driven journalism tools play a significant role in enhancing creative writing, which in turn strongly contributes to the development of essential competencies for the 21st century.

The analysis also reveals that the relationship between AI Integration in Journalism Platforms and Edupreneurship is positive (path coefficient of 0.522), indicating that AI-driven tools significantly support students in transforming their creative writing skills into entrepreneurial opportunities. This result underscores the value of AI in bridging creative expression with practical business applications, enabling students to develop a digital entrepreneurial mindset. AI tools not only enhance writing proficiency but also empower students to market their content and scale their ideas into sustainable ventures. Furthermore, the structural model analysis shows that Creative Writing Skills serve as a critical mediator in the relationship between AI Integration and 21st-Century Competencies. The high path coefficient of 0.806 between Creative Writing Skills and 21st-Century Competencies suggests that improving writing skills through AI platforms directly fosters

competencies such as critical thinking, digital literacy, and creative problem solving. This finding aligns with the objective of integrating technology into education, demonstrating how AI-enhanced learning can equip students with the skills needed to thrive in the modern, digital-driven world [50].

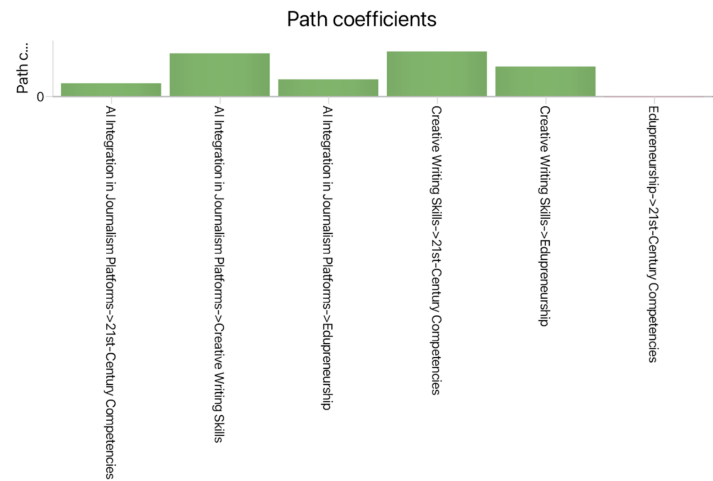


Figure 3. Path Coefficient

The path coefficient results presented in figure 3 indicate varying levels of influence among the proposed relationships in the research model. The strongest positive effects are observed from AI Integration in Journalism Platforms → Creative Writing Skills and Creative Writing Skills → 21st-Century Competencies, demonstrating that the integration of AI tools significantly enhances students’ writing abilities, which in turn strongly contributes to the development of essential competencies for the modern era. Moderate positive effects are found for Creative Writing Skills → Edupreneurship and AI Integration in Journalism Platforms → Edupreneurship, suggesting that both direct skill development and AI adoption can foster entrepreneurial capacity. In contrast, the paths AI Integration in Journalism Platforms → 21st-Century Competencies and Edupreneurship → 21st-Century Competencies show minimal direct influence, indicating that their impact on competencies is likely mediated through improved creative writing skills. These findings align with the theoretical expectation that writing proficiency serves as a key bridge between technological integration, entrepreneurship, and the acquisition of 21st-century skills.

Table 1. Reliability and Validity of Constructs

Construct	Cronbach’s Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
21st-Century Competencies	0.858	0.860	0.904	0.702
AI Integration in Journalism Platforms	0.830	0.849	0.988	0.622
Creative Writing Skills	0.857	0.850	0.930	0.701
Edupreneurship	0.801	0.809	0.870	0.626

The measurement model evaluation presented in table 1 demonstrates that all constructs meet the recommended thresholds for reliability and convergent validity. Cronbach’s alpha values range from 0.801 to 0.858, exceeding the minimum criterion of 0.70, indicating strong internal consistency among the indicators of each construct. Similarly, the composite reliability (rho_c) values are all above 0.86, confirming the robustness of the measurement scales. The Average Variance Extracted (AVE) for all constructs is also above the 0.50 threshold, with values ranging from 0.626 to 0.702, signifying adequate convergent validity and that the majority of variance is explained by the indicators rather than measurement error. These results collectively confirm

that the measurement model is reliable and valid, providing a solid foundation for subsequent structural model analysis. The findings of this study are closely aligned with several Sustainable Development Goals (SDGs) that emphasize the integration of technology, education, and innovation. Specifically, SDG 4 (Quality Education) is directly addressed through the use of AI-driven journalism platforms to enhance creative writing and entrepreneurship, equipping students with the essential skills required for modern education. This integration allows students to produce market-ready content, aligning with SDG 8 (Decent Work and Economic Growth) by nurturing entrepreneurial capabilities. Furthermore, the inclusion of AI tools in curricula addresses SDG 9 (Industry, Innovation, and Infrastructure) by enhancing educational infrastructures and promoting innovation through the use of advanced technologies in journalism education.

5. MANAGERIAL IMPLICATIONS

5.1. Integration of AI in Journalism Curricula

For educators, integrating AI tools in journalism curricula is essential to prepare students for the evolving media landscape. AI platforms that offer personalized feedback and content generation should be embedded into writing assignments, allowing students to improve their creative writing skills and adapt to technological advancements. This integration would empower students with both technical and entrepreneurial competencies, enabling them to work efficiently in the digital age and create marketable content.

5.2. Fostering Edupreneurship through AI Tools

AI tools can be pivotal in fostering edupreneurship, which involves turning educational content into entrepreneurial ventures. Journalism faculties should encourage students to view their creative writing as valuable assets that can be monetized. Educators can incorporate assignments where students create digital products like e-books, articles, or even multimedia stories using AI tools, which they can then market or sell. This approach bridges education with real-world business practices.

5.3. Personalized Learning for Diverse Student Needs

AI-based platforms can provide personalized learning experiences, particularly beneficial for students with diverse needs and learning speeds. By adopting AI in the classroom, educators can ensure that all students receive the specific feedback and support they need, thereby enhancing their individual growth. This personalized approach would not only improve writing proficiency but also allow students to hone their unique skills in a manner suited to their learning preferences.

5.4. Promoting Digital Literacy and Critical Thinking

Integrating AI in journalism education promotes digital literacy, an essential skill for students in the 21st century. As students engage with AI tools, they also develop critical thinking skills by evaluating the output of these systems, making decisions on content quality, and understanding the ethics behind AI-generated content. This exposure equips students to be not only proficient writers but also ethical creators, ready to tackle the challenges of the digital era.

5.5. Collaboration between Educational Institutions and Tech Developers

To ensure the success of AI integration, collaboration between educational institutions and AI developers is crucial. Universities should work closely with AI companies to design tools tailored to the specific needs of journalism students. By fostering such partnerships, educational institutions can ensure that AI tools are both accessible and aligned with industry standards, ultimately preparing students for careers in the rapidly changing media and tech industries.

6. CONCLUSION

The results confirm that AI integration into journalism platforms significantly enhances creative writing skills and fosters entrepreneurial capacities among students. These improvements are foundational to the development of essential 21st-century competencies, including critical thinking, digital literacy, and collaborative skills. The study highlights the importance of aligning AI technologies with educational goals to ensure that students are not only proficient in writing but also equipped to thrive in the digital economy. Furthermore, the integration of AI facilitates the development of new educational products and innovative business models, contributing to the growth of edupreneurship. Educational institutions must embrace AI tools to create a

more interactive, personalized, and scalable learning environment that aligns with global goals such as quality education, economic growth, and innovation.

The analysis further reveals that creative writing proficiency positively contributes to edupreneurship by enabling students to view their work as marketable content and apply entrepreneurial strategies, including digital marketing. While AI integration also directly influences edupreneurship, the pathway through enhanced creative writing proves to be a stronger driver for fostering entrepreneurial capabilities. Additionally, the development of 21st-century competencies comprising critical thinking, digital literacy, collaboration, and creative problem-solving is found to be more effectively achieved when both AI-driven learning and writing skills are strategically aligned within educational frameworks.

From a practical perspective, the study offers valuable implications for educators, policymakers, and industry stakeholders seeking to modernize journalism education. Integrating AI into curricula can create a more interactive, personalized, and market-relevant learning environment, while also aligning with global agendas such as the Sustainable Development Goals (SDGs). By embedding AI literacy, creative expression, and entrepreneurship within journalism training, institutions can prepare graduates who are not only adept at navigating the evolving media landscape but also capable of innovating and contributing meaningfully to the digital economy. Future research could explore longitudinal impacts, cross-cultural applications, and expanded AI toolsets to further validate and extend these findings.

7. DECLARATIONS

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7.2. Author Contributions

Conceptualization: HN; Methodology: SS; Software: HB; Validation: RP and HZ; Formal Analysis: HN and SS; Investigation: SS; Resources: HB; Data Curation: RP; Writing Original Draft Preparation: HZ and HN; Writing Review and Editing: RP and HZ; Visualization: SS; All authors, HN, SS, HB, RP and HZ have read and agreed to the published version of the manuscript.

7.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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7.5. Declaration of Conflicting Interest

The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

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