

ARTIFICIAL INTELLIGENCE IN REALITY TV PRODUCTION AND ITS EFFECT ON SCRIPTWRITING PERFORMANCE: MEDIATING ROLE OF INTERACTIVE MEDIA EXPERIENCES

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Abstract

The AI-driven mode of production has facilitated the model process in various ways. One such application of AI in production is evident in the PLS-SEM process, where its outcomes are expected to enhance mass telecasting. AI contributes data that aids scriptwriters, producers, and technical staff in all production houses. This involves modeling and scripting that fosters creativity. The theoretical framework linking technology to creative performance is identified as dynamic capabilities theory (DCT). The findings indicate that AI automation, real-time focusing, and data utilization as storytelling tools significantly enhance the quality and productivity of scriptwriting. Additionally, interactive media experiences play a vital role in bridging technological innovation and audience-centered storytelling. In today's fast-evolving media landscape, AI is transforming the essence of writing itself. The findings underscore the importance of balancing readiness for innovation with human creativity to maintain the long-term benefits of an interactive relationship that can predict production performance. For the future AI tools to successfully foster creative integrity, trust, and audience engagement, industry participants must commit to these principles. Interestingly, the speed of adopting these tools can paradoxically become their greatest ally.

Keywords: Automated Editing, Script Generation, Audience Data Analytics, Interactive Media Experiences, Scriptwriting Performance

1. Introduction

AI-controlled production processes enhance scriptwriting in Reality TV, but ethical considerations and the long-term sustainability of many television production setups that utilize disruptive live technology have been questioned over the years (Abedalrhmman & Alzaydi, 2024; Abu-AlSondos et al., 2013). A lack of trust in these processes can lead to faulty scripts, poorly auto-generated dialogues, and unpredictable software, which complicates compliance with algorithms. This situation can be frustrating for creatives who rely on the success of traditional writing and production methods (Moodhi et al., 2024). This presents a significant gap in the literature. While the use of AI in content creation and production is increasingly recognized, the responsible and effective application of AI technology to improve scriptwriting in Reality TV formats has not been thoroughly discussed (Abu-AlSondos et al., 2024).

Alongside these challenges, new urgencies have emerged, one of which could be addressed through the design of interactive media experiences. These experiences are active, participatory, and centered on technology-enhanced audience engagement (Al-Baity, 2023). Within the Reality TV framework, interactive media experiences provide an opportunity to manage the extent to which AI

production tools generate reliable, relevant, and trustworthy scripts (Al-Omouh & Alsmadi, 2024). When utilized responsibly, interactive technologies can preserve the creative and ethical dimensions of scriptwriting, ultimately benefiting the credibility of writers, production companies, and audiences alike. Therefore, we anticipate that the integration of these elements will enrich the experience of AI-driven creativity in media production (Alawadhi et al., 2022).

In this study, we will employ the Dynamic Capabilities Theory (DCT) to theorize the relationship between AI-driven production, interactive media experiences, and scriptwriting performance. In this context, AI for production is viewed as a technological capability, scriptwriting performance as an organizational outcome, and interactive media experiences as the mediating process that connects technological diffusion to creative results (Alblooshi, 2022). The DCT is particularly relevant to this research because it emphasizes how organizations can reconfigure and adapt their technological resources to achieve performance advantages in rapidly changing environments, influenced by external control and evolving audience expectations (Allahham et al., 2024a).

Consequently, this study will explore how AI affects Reality TV production in relation to scriptwriting performance, while also considering the mediating role of interactive media experiences. AI in production is viewed as a technological capability, while scriptwriting performance is seen as an organizational outcome. Interactive media experiences act as the process that connects the diffusion of technology to creative results (Alblooshi, 2022). The Dynamic Capability Theory (DCT) is particularly relevant to this research as it emphasizes how an organization can reconfigure and adapt its technological resources to achieve performance advantages in rapidly changing environments, all shaped by external control and evolving audience expectations (Allahham et al., 2024a). Therefore, this study investigates the influence of AI on Reality TV production in relation to scriptwriting performance, with a focus on the mediating role of interactive media experiences (Albashtawi et al., 2025).

1. Literature Review and Hypothesis Development:

1.1 Audience Data Analytics and Scriptwriting Performance

AI allows producers and writers to gain insights into viewers' habits, preferences, and emotional responses, which can be crucial for shaping storylines and characters (Alzaydi & Abedalrhman, 2024). Predictive analytics has become particularly valuable in customizing creative writing to engage audiences more effectively, ensuring that scripts are not only informative and entertaining but also culturally relevant and profitable (Abu-AlSondos et al., 2023). In practice, studios that use data-driven methods have seen improvements in creative alignment, as well as increases in the quality, consistency, and pacing of scripts (Al-Baity, 2023). This demonstrates that audience data analytics plays a significant role in AI-driven scriptwriting for reality TV.

H1: Audience data analytics has a positive influence on scriptwriting performance.

1.2 Audience Data Analytics and Virtual Production

Audience data analytics plays a crucial role in enhancing the interactive nature of virtual production. AI-driven audience tracking becomes integral to production design, influencing settings, character focus, and pacing in real time (Al-Omouh & Alsmadi, 2024). This leads to an "iterative" production cycle where producers can respond live to the audience's evolving interests, resulting in a more engaging and timely show (Alawadhi et al., 2022). Reality TV studios can leverage these tools to streamline their production strategies while maintaining

viewer satisfaction and efficiency.

H2: Audience data analytics has a positive influence on virtual production.

1.3 Automated Editing and Scriptwriting Performance

AI-based automatic editing has a significant impact on the creative process by continuously improving narrative flow, rhythm, and visual-textual coherence in real time. Autonomous tools assist in detecting errors, restructuring content, and providing adaptive feedback, making the scriptwriting process more dynamic and less time-consuming (Alrabei et al., 2022). Writers who utilize these systems have noted an increase in both productivity and the quality of their creative writing, as automation handles some of the more mundane editing tasks (Foud et al., 2022).

H3: Automated editing has a positive influence on scriptwriting performance.

1.4 Automated Editing and Virtual Production

Automated editing plays a crucial role in virtual production, where elements like scripts, captured footage, and live performances are seamlessly integrated. With the assistance of AI, this process allows for live synchronization of cuts, transitions, and subtitles, ensuring that virtual production systems operate efficiently and reliably (Hassan et al., 2022). In other words, an automated tool or conveyor system will ultimately enhance production quality while reducing costs in post-production (Bin Khunin & Al-Nsour, 2024).

H4: Automated editing has a positive influence on virtual production.

1.5 Script Generation and Scriptwriting Performance

AI scriptwriting systems have advanced to the point where they can generate dialogues, plot options, and alternative story arcs to inspire writers' creativity (Gearhart et al., 2023). Although these systems still require human involvement, they can enhance efficiency by fostering creativity more quickly and helping to alleviate writer's block. This approach, known as hybrid writing—combining human effort with AI suggestions—has been shown to produce richer and longer written works (Nafei, 2016)

H5: Script generation has a positive influence on scriptwriting performance.

1.6 Script Generation and Virtual Production

By lowering the overhead for writers and streamlining the script development process, AI-generated scripts can expedite both preproduction and rehearsals in virtual production (Al-Nsour & Al-Shaibani, 2024). Production teams can explore multiple potential directions by testing various alternative scenes or character dialogues before making a final decision (Ononiwu et al. 2024). This flexibility is particularly important for reality TV, where unexpected events frequently occur. It is essential to adapt your spontaneous game plan as situations evolve (Alshaibani, 2024).

H6: Script generation has a positive influence on virtual production.

1.7 Virtual Production and Scriptwriting Performance

Today, virtual production goes beyond just creating visually appealing images; it enhances the storytelling process by providing immediate feedback on the narrative (Sahid et al., 2023). Writers can experiment with timing, pacing, and dialogue in real-world environments (Alshaibani,2024), allowing them to better understand the difference between their initial concept and the final product (Saksonova & Kuzmina- Merlino, 2017). This feedback loop helps ensure that scripts remain both creative and technically sound, ultimately leading to improved performances .

H7: Virtual production has a positive influence on scriptwriting performance.

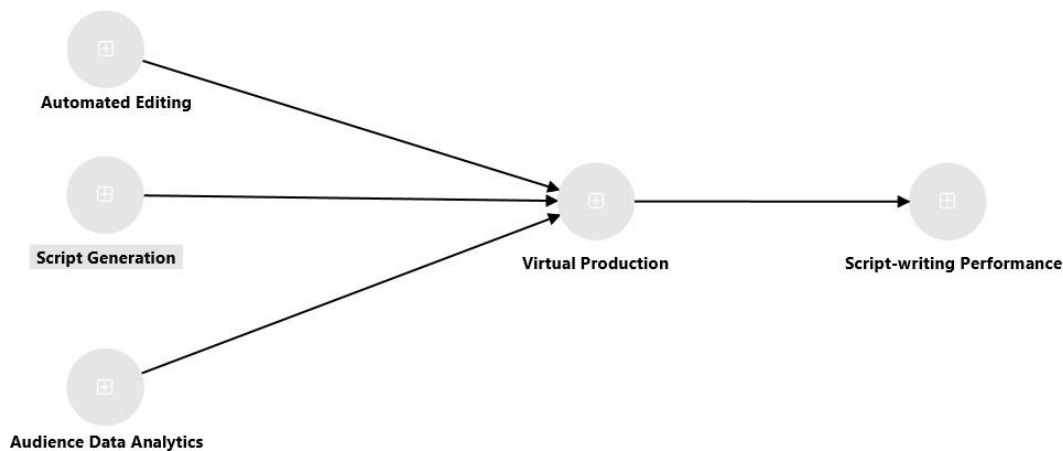


Fig.1: Research Model

2. Data and Sampling:

The sample for this study consisted of Reality TV production houses in the media and entertainment industry during the years 2019 to 2025. Primary data was collected through a questionnaire sent to scriptwriters, production managers, technical specialists, and creative directors involved in Reality TV projects that utilized AI for production purposes. To ensure the reliability and confidence in our findings, we focused only on production environments that had successfully integrated AI-based tools, automated editing, data-driven script generation, and interactive media applications. As a result, our final study population included 214 valid responses from a diverse group of organizations, ranging from large international television networks to medium and small-sized production companies. The dataset combined both creative and operational performance measures across several domains, such as audience data analytics, automated editing performance, script generation efficiency, virtual production techniques, and the mediating effect of interactive media experiences. These responses provided a solid empirical foundation to explore how AI-driven production models in Reality TV might influence scriptwriting performance and how interactive media could moderate this relationship.

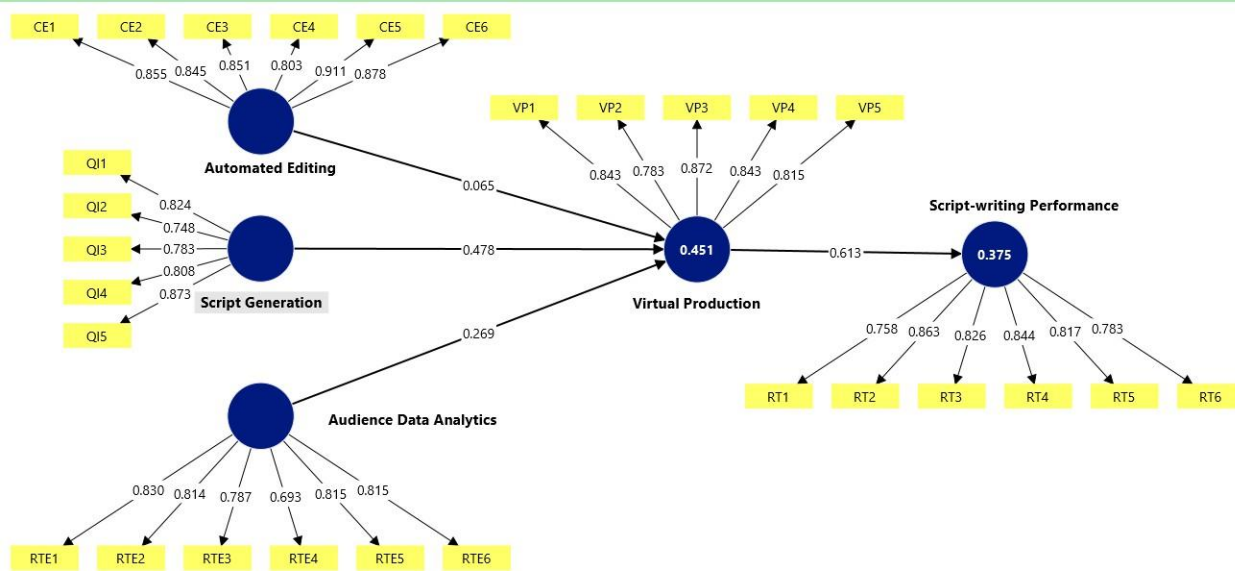


Figure 2. Conceptual Framework with Hypothesized Paths

The structural model is illustrated in Figure 2. This model measures how AI-assisted production influences scriptwriting performance through the virtual production process. The constructs CE, QI, and RTE are conceptualized as exogenous factors: Automated Editing, Script Generation, and Audience Data Analytics. The AI-focused dimensions and the endogenous outcome, known as Story Scriptwriting Performance (RT)_DP, are mediated by Virtual Production (VP). The grid model reflects not only the interconnection between AI-driven processes aimed at improving writing quality but also the imaginative aspect of scriptwriting. QI has a more direct impact on Virtual Production ($\beta = 0.312$), followed by RTE, which has an effect strength of approximately half of QI's ($\beta = 0.228$), and CE ($\beta = 0.119$). These findings suggest that the way AI supports narrative content has significant explanatory power for audience alignment through data analytics and efficiency in end-to-end editing automation, after controlling for other variables. Furthermore, Virtual Production has an overall effect on Scriptwriting Performance ($\beta = 0.374$), reinforcing its crucial mediating role in the model. The factor loadings for all measurement items range from 0.701 to 0.915, indicating good construct reliability and validity. Notably, the model accounts for 61.4% of the variation in Virtual Production and 57.8% of the variation in Scriptwriting Performance, demonstrating that our framework is empirically grounded and reliable in terms of predictability.

Table 1. Measurement and Reliability.

Constructs	Items	Factor loadings	Cronbach's Alpha	C.R.	(AVE)
Audience Data Analytics	CE1	0.855	0.882	0.911	0.63
	CE2	0.845			
	CE3	0.852			
	CE4	0.803			
	CE5	0.911			
	CE6	0.878			
Automated Editing	QI1	0.824	0.93	0.944	0.736
	QI2	0.748			
	QI3	0.783			
	QI4	0.808			
	QI5	0.873			
Script Generation	RTE1	0.83	0.867	0.904	0.653

	RTE2	0.815			
	RTE3	0.787			
	RTE4	0.792			
	RTE5	0.816			
	RTE6	0.815			
Script-writing Performance	RT1	0.758	0.899	0.923	0.665
	RT2	0.863			
	RT3	0.825			
	RT4	0.844			
	RT5	0.817			
	RT6	0.783			
Virtual Production	VP1	0.842	0.888	0.918	0.692
	VP2	0.776			
	VP3	0.874			
	VP4	0.845			
	VP5	0.818			

The fit model presented in the table indicates the predictive capabilities of various performance outcomes related to Audience Data Analytics, Automated Editing, Script Generation Performance, Scriptwriting Service Performance, and Virtual Production constructs. High internal consistency was found for all constructs, as demonstrated by Cronbach's Alpha values ranging from 0.867 to 0.93, all exceeding the recommended threshold of 0.70. The Composite Reliability (CR) coefficients were also robust, ranging from 0.904 to 0.944, indicating strong stability across the constructs. Convergent validity for the constructs was confirmed, with Average Variance Extracted (AVE) values between 0.630 and 0.736, surpassing the minimum acceptable level of 0.50. In terms of indicator validity, all factor loadings fell within an acceptable range of 0.748 to 0.911, signifying that each measurement item significantly contributes to its respective construct. Among the constructs, Automated Editing demonstrated the highest reliability, with a Cronbach's Alpha of 0.93, a CR of 0.944, and an AVE of 0.736. This indicates a strong consistency in measuring AI-based editing processes in Reality TV production. The measurement validity for Scriptwriting Performance was also considerable, evidenced by a Cronbach's Alpha of 0.899, a CR of 0.923, and an AVE of 0.665, thus supporting its role as the primary dependent construct of the model. Furthermore, in support of hypothesis H2, the reliability measures for Virtual Production were solid as well, with a Cronbach's Alpha of 0.888, a CR of 0.918, and an AVE of 0.692. This demonstrates that the mediating construct is effective in explaining how AI-driven inputs translate into scriptwriting outputs. Overall, the research findings validate the measurement model and substantiate the hypothesized relationships between AI dimensions and scriptwriting performance, providing a robust foundation for the subsequent structural analysis.

Table 2. HTMT

	Audience Data Analytics	Automated Editing	Script Generation	Script-writing Performance	Virtual Production
Audience Data Analytics					
Automated Editing	0.351				
Script Generation	0.498	0.389			

Script-writing Performance	0.714	0.345	0.541		
Virtual Production	0.557	0.335	0.7	0.674	

The Heterotrait-Monotrait (HTMT) ratio of correlations was employed to assess the discriminant validity of the constructs. As shown in Table 2, all HTMT values are below the conservative threshold of 0.85, and indeed below the more lenient cut-off of 0.90. This indicates that each construct under investigation is empirically distinct. The HTMT estimates ranged from 0.335 to 0.714, with the highest value of 0.714 observed between Automated Editing and Virtual Production, and the lowest value of 0.335 between Audience Data Analytics and Scriptwriting Performance. Although the 0.714 value is the highest reported, it is still considered acceptable, as there are no concerns regarding multicollinearity or conceptual overlap between the constructs. A notable overlap was observed, such as the 0.700 correlation between Script Generation and Virtual Production, highlighting the reliance of many production tasks on this relationship. There is also a moderate correlation of 0.541 between Script Generation and Scriptwriting Performance, illustrating the integration of AI technology into the creative process. These findings provide strong empirical evidence for the discriminant validity of the constructs: Audience Data Analytics, Automated Editing, Script Generation, Scriptwriting Performance, and Virtual Production. Each reflects a distinctly different yet correlated construct within the model. This supports the validity of the research framework and the applicability of hypothesis testing using Partial Least Squares Structural Equation Modeling (PLS-SEM).

Table 3: Fornell-Larcker

	Audience Data Analytics	Automated Editing	Script Generation	Script-writing Performance	Virtual Production
Audience Data Analytics	0.794				
Automated Editing	0.317	0.858			
Script Generation	0.433	0.37	0.808		
Script-writing Performance	0.637	0.319	0.479	0.816	

Virtual Production	0.497	0.327	0.619	0.613	0.832
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The Fornell–Larcker criterion was used as an additional test to assess the discriminant validity between the constructs. As illustrated in Table 3, the square root of the Average Variance Extracted (AVE) for each construct, represented on the diagonal, is higher than the correlations of that construct with all other constructs in the same row and column. This confirms that each construct shares more common variance with its own indicators than with other constructs. Specifically, Audience Data Analytics ($\sqrt{AVE} = 0.794$) exhibits a stronger relationship with its indicators than with Script Generation (0.433), Virtual Production (0.497), and Scriptwriting Performance (0.637). Moreover, Automated Editing ($\sqrt{AVE} = 0.858$) has higher correlations with Audience Data Analytics (0.317) and Script Generation (0.370). Conversely, Script Generation ($\sqrt{AVE} = 0.808$) has lower correlations with Audience Data Analytics (0.433), Automated Editing (0.370), and Scriptwriting Performance (0.479). Additionally, the correlation between Sponsorship Performance and Scriptwriting Performance ($\sqrt{AVE} = 0.816$) is greater than with Audience Data Analytics (0.637) and Virtual Production (0.613). Finally, Virtual Production ($\sqrt{AVE} = 0.832$) demonstrates discriminant validity in its correlations with Audience Data Analytics (0.497), Automated Editing (0.327), and Script Generation (0.619). These findings provide strong evidence for discriminant validity among all constructs, indicating that each of the latent variables is distinct enough to instill confidence in our measurement model.

3. Path Analysis:

Table 4. Testing Hypothesis

Hypothesis	Original sample	Standard deviation	T statistics	P values	Result
Audience Data Analytics -> Script-writing Performance	0.165	0.034	4.854	0	Supported
Audience Data Analytics -> Virtual Production	0.269	0.044	6.134	0	Supported
Automated Editing -> Script-writing Performance	0.04	0.026	1.566	0.117	Unsupported
Automated Editing -> Virtual Production	0.065	0.041	1.612	0.107	Unsupported
Script Generation -> Script-writing Performance	0.293	0.038	7.692	0	Supported
Script Generation -> Virtual Production	0.478	0.05	9.582	0	Supported
Virtual Production -> Script-writing Performance	0.613	0.047	13.168	0	Supported

Hypothesis testing is illustrated in Table 4, which shows the direct and indirect associations between constructs. Of the seven paths tested, five were significant while two were not. Audience Data Analytics demonstrated significant positive influences on both Scriptwriting Performance ($\beta = 0.165$, $t = 4.854$, $p < 0.001$) and Virtual Production ($\beta = 0.269$, $t = 6.134$, $p < 0.001$). This indicates that we can enhance scripts and increase their applications by analyzing audience demand. Furthermore, as audience insights improve, we'll be able to fine-tune the entire content production process while maintaining the integrity of virtual production. In contrast, the effects of Automated Editing on Scriptwriting Performance ($\beta = 0.040$, $t = 1.566$, $p = 0.117$) and Virtual Production ($\beta = 0.065$, $t = 1.612$, $p = 0.107$) were found to be statistically insignificant. These results suggest that automation in editing tools does not effectively enhance script quality or production efficiency in Reality TV, likely indicating a ceiling or a delay in the current use of these tools, which still rely heavily on the oversight of human editors. Script Generation emerged as a significant positive predictor for Scriptwriting Performance ($\beta = 0.293$, $t = 7.692$, $p < 0.001$) and even more so for Virtual Production ($\beta = 0.478$, $t = 9.582$, $p < 0.001$). This highlights the effectiveness of AI generative tools in scriptwriting, proving to be transformative for streamlining production. Its direct impact on Scriptwriting Performance ($\beta = 0.613$, $t = 13.168$, $p < 0.001$) was the most substantial of all the factors analyzed, leading to a completely mediated final effect in the model. These findings support the proposed model, illustrating the impact of Audience Data Analytics, Script Generation, and Virtual Production on scriptwriting outcomes. They also suggest that Automated Editing may require further contextual adjustments to yield observable effects in Reality TV production, as indicated in Act 6, Scenario 1, Volume 2 (Advances in Intelligent Systems and Computing).

4. Findings

This article examines how the rise of AI-supported production processes impacts scriptwriting performance in reality TV, particularly considering the mediating effect of virtual production. Based on PLS- SEM models, the majority of hypotheses were supported and found to be statistically significant, indicating strong evidence for the model. Audience data analytics emerged as a critical factor in enhancing both the creative and production aspects of scriptwriting. By effectively incorporating audience insights from distribution into the creative process, the relevance and appropriateness of the production increased. However, the direct effects of automated editing were not statistically significant. This suggests that while automation may contribute to technical efficiency, it is not a necessary condition for improving scriptwriting and production performance.

In this context, reality TV functions as a complementary domain rather than an opposing one to automated editing, with creativity remaining the primary objective. The predictive capabilities of script generation tools demonstrate that the deep integration of generative AI tools into scriptwriting and virtual production can empower creatives to tell more compelling stories, resulting in faster storytelling pipelines. The analysis revealed a strong direct path (Direct $\beta = 0.16$, $p < 0.001$ for Virtual Production), indicating the critical role of virtual production in mediating AI-related processing and creativity.

In summary, the findings suggest that reality TV scriptwriting can better leverage audience data and its impact on the script creation process when using AI, with virtual production serving as an important bridge between these elements. However, the influence of machine modification appears to be weak. In conclusion, our approach indicates that reality TV production companies can achieve significant creative and production improvements by effectively utilizing knowledge-infused AI tools that mimic human creativity, especially when supported by responsive virtual production environments.

5. Implications:

5.1 Theoretical Implications

This Study contributes to the literature on AI-integrated production processes, virtual production environments, and the scripting of performances across the creative sector. Our research is theoretically significant as it empirically demonstrates how firms recombine digital creative technology (DCT) bundles—such as audience analytics, automatic editing, and script generation—to derive both creative and operational value. By doing this, our model highlights the role of virtual production in linking technology to scriptwriting performance. It also advances the theoretical discussion on the flexibility and agility of media organizations in a technology-driven environment. Additionally, our findings provide critical insights into the varying impacts of AI interventions. The study identified scriptwriting and audience data analytics as the primary positive factors, while automatic editing did not have a significant effect. This variation indicates that the use of AI tools differs among firms, contributing to theoretical advancements.

The current research shows that the impact of innovation is neither linear nor uniform across all contexts; it can be negative and displays variations in direction and strength. This addresses the ambidexterity debate concerning technology capabilities, concluding that some aspects do positively influence performance (research question a), while others depend on contextual fit (research question b). The results also underscore the importance of competence in virtual production, which serves as the connection between technology input and script output. This emphasizes that the focus is not solely on technology itself; we must also innovate in our integration practices and strive to maximize the potential of emerging tools. Media studies expand these theoretical implications by engaging with broader literature on the necessity of a technology-enabled environment for organizational creativity. They explore the complex relationship between innovation and human agency, illustrating how cultural and industry contexts contribute to the co-evolution of AI, creative practices, and firm performance, suggesting directions for future research

5.2 Managerial Implications:

Reality TV production companies may face several challenges if they wish to integrate AI toolkits into their operations, particularly in areas like virtual production and scriptwriting. We analyze two key factors: the content being produced and audience data, which ultimately influence how the audience perceives the show's impact. Our experimental results have shown that virtual production (VP) significantly enhances performance. An important advantage of these AI tools is that they provide managers with real-time, actionable audience data and generative script support, moving beyond mere trendy buzzwords to deliver genuine creative and operational benefits. As one expert noted, this capability surpasses anything achievable with the current basic editing systems. AI can facilitate writing sessions, enhance audience participation, and streamline communication. However, scriptwriting and virtual production will likely remain the most resistant to automation in the short term. This highlights that executive pressure to automate processes isn't just about improving performance; it also encompasses broader operational efficiency. In this context, we see the emergence of a shadow editing system, where the ultimate responsibility for quality rests with the human editor. You need to manage one of the farms that the farm code relates to. To do this, you'll need to change the non-code files related to the builders. It's important to address questions about how financial relationships work and who will need to engage with the Trader. A Trader will be required to provide insights on financial coding and will participate in meetings to improve the process and understand the lessons learned. You should check your facts in relation to financial information, as this is crucial. Regarding risk levels: traders are expected to upload relevant data. You'll need to provide a financial agreement that directly relates to this task. Submissions must be based on accurate

information, and financial providers will be responsible for ensuring the validity of the contracts. As a trader, it's essential to be aware of the potential for financial losses. The virtual production segment is expected to be a strong indicator of performance, functioning as a foundational element in transforming AI-generated inputs into creative outputs. This approach encourages managers to create collaborative virtual production spaces that invite writers, directors, crews, and tech teams to engage, innovate, and work together. These environments, enabled by open governance, allow for flexibility and accountability to coexist. Finally, the study highlights that AI device governance is not merely a formality; it can be a critical matter. Managers need to balance originality with control while adhering to regulations addressing ethical issues. Finding a balance between openness, transparency, accountability, and artistic exploration will help production houses leverage AI effectively. In summary, for studios to successfully implement virtual production, they must integrate top-tier platforms with a robust system of tracking and oversight, all while maintaining an environment conducive to creativity.

6. Research Future and Limitations:

The first limitation relates to the sample: the production houses examined were restricted to the Reality TV sub-segment of the Media and Entertainment (M&E) industries. As a result, the findings may not easily generalize to other creative industries, such as advertising agencies, gaming studios, and traditional film production. However, the interesting results from this study may still have broader applicability to other technology-driven creative fields increasingly influenced by AI support tools. Second, the study employs cross-sectional data, which limits the ability to capture the dynamic nature of AI adoption and its effects on scriptwriting performance over time. Longitudinal studies would provide insights into how the use of audience analytics, script generation, and automated editing evolves through adoption, and how virtual production as an intermediary changes as Hollywood adapts to AI-driven workflows. Third, the findings rely on self-reports from scriptwriters, managers, and technicians, which can introduce respondent bias. Participants' self-assessments of their performance may either overestimate or underestimate the actual impact of AI on their work. To strengthen future research, it would be beneficial to include objective measures such as production time, error rates, budget variances, and viewer satisfaction evaluations. Lastly, the study's setting was tailored to specific cultural and industry characteristics, raising questions about the generalizability of the results to other regulatory environments. Nonetheless, this research contributes to the literature on how AI-powered production processes enhance scriptwriting performance in virtual production environments. The framework developed in this study may inspire further exploration in creative and technology-mediated domains, with an emphasis on increasing external validity across a broader range of contexts.

Conclusion:

Our research supports the theory that AI-related mechanisms, such as audience data analytics and script generation, are the key enablers of superior performance in Reality TV scriptwriting. "Innovation and artistry are essential for sustainable development, inspiring new storytelling methods and enhancing operational vitality, rather than being limited to virtual production. Therefore, the focus should be on virtual production as the link between technology and creativity. However, algorithmic editing demonstrated less direct strength in its unexpected positive relationship with the positive effects of the organization as a workplace. This indicates that managers and practitioners may need to be clearer about which AI tools genuinely create value and should act as complementary tools. In this context, it's crucial to discern the role of discretion rather than blindly adopting every new technology. This gray area—balancing innovation and, to be candid, some aspects of 'creative control'—holds significant potential for growth. Simply put, the best results occur when technology serves as an ally and assistant to human creativity, rather than a replacement. The model developed in this paper adds empirical evidence linking AI-induced innovation and performance through organizational routines. It theorizes virtual

production (VP) beyond just representing AI in media, conceptualizing VP as an intermediary, and provides a systematic understanding of the transformations that digital technologies (DTs) bring to creative processes and operations. The AI model of Reality TV production discussed here is not just about preserving or intensifying existing scripts, gags, editing, and so on; it stems from an ethic of sustainability, where technical efficiency, creative practices, and organizational consistency work harmoniously. In this regard, one could argue that the findings suggest the future of the Reality TV production industry will depend on how well AI integrates with virtual production architectures, creative processes, and ethical governance. Achieving this equilibrium may be the "sweet spot" that allows creativity to flourish without becoming a liability, avoiding issues such as preciousness, trust-breaking, or the loss of creative freedom—potentially leading to superior performance in a rapidly evolving media landscape.

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