

CORPORATIVE GOVERNANCE IN THE LITERATURE FROM 2020 TO 2024

María del Rosario Molina González, Universidad de Sonora
Cruz García Lirios, Universidad de Sonora
María Teresa Gaxiola Sánchez, Universidad de Sonora
María de Jesús Camargo Pacheco, Universidad de Sonora
Rafael Campoy Mendoza, Universidad de Sonora
Marco Antonio Velderrain Rodríguez, Universidad de Sonora

ABSTRACT

The pandemic impacted knowledge management through anti-COVID-19 policies of social distancing and confinement. Educational systems went from the face-to-face classroom to the virtual classroom through the self-management of content according to technology, devices and platforms. The objective of this work was to explore the dimensions of knowledge management in the context of the health crisis. A psychometric, exploratory, correlational, and cross-sectional study was carried out with a sample of 100 students selected based on their computer skills, informational entrepreneurship, and academic innovation at a university in central Mexico. The results indicate the non-rejection of the null hypothesis regarding the differences between the theoretical structures of three dimensions with respect to the observed empirical structure. In relation to anti-pandemic policies, risk prevention and the promotion of self-management of knowledge are recommended as an extensive factor of the proposed model.

Keywords: Agenda, Self-management of Knowledge, COVID-19, Factorial Model, psychometric

INTRODUCTION

According to the epidemiological traffic light system, policies aimed at combating COVID-19 determined the level of restrictions, social distancing measures, and the adoption of protective measures like face masks. The educational realm experienced a shift from traditional face-to-face teaching to virtual classrooms due to the pandemic (García et al., 2017). Consequently, the health crisis and the implemented policies brought about a different environment for managing knowledge compared to pre-pandemic times.

Previously, knowledge management mainly involved translating and sharing findings within physical classrooms (Sánchez et al., 2018). Teaching methods emphasized knowledge transfer rather than active content creation, fostering a one-way dynamic between teachers and students. However, the COVID-19 crisis disrupted this traditional structure, pushing towards a more self-directed approach to learning.

In virtual classrooms, students are no longer mere recipients of knowledge but actively engage in producing and managing content, focusing on their individual skills (García & Bustos, 2021). Unlike traditional classrooms, interactions between teachers and students occur asynchronously and in multiple directions. Traditional teaching involved searching, translating, and presenting information, whereas virtual self-management emphasizes content creation, sharing, and empowerment.

Transitioning from face-to-face to virtual classrooms involves a process of knowledge creation, management, and transfer, where entrepreneurship and innovation play key roles in addressing the challenges posed by the pandemic (Aldana et al., 2018). While risk management dominated discussions in traditional classrooms during crises like the pandemic, virtual classrooms prioritize entrepreneurship and innovation as strategies for mitigating risks.

As the pandemic persists, personalized knowledge management takes precedence over traditional methods, with a focus on content entrepreneurship and innovation (García, 2022). Immersive learning technologies such as augmented reality, gamification, and interactivity facilitate a deeper understanding of content in unconventional situations.

Immersive learning reduces reliance on traditional teaching methods and fosters entrepreneurship and innovation, paving the way for self-directed knowledge management in the COVID-19 era (Garcia, 2020). However, despite ongoing efforts, the transition to immersive learning has been slow in virtual classrooms, which often replicate traditional teaching methods. This suggests a need for further integration of immersive learning paradigms, emphasizing self-management and skill development.

In the context of immersive learning, which includes digital culture, information economy, and competency-based education, knowledge management aims to cultivate intellectual capital through technology and information networks (García Lirios, 2021). This process starts with developing a habit of seeking information, followed by acquiring computer skills essential for the job market and professional growth, ultimately leading to the transformation of intellectual capital into a valuable asset.

The objective of this study is to compare the theoretical framework of knowledge management reported in literature from 2019 to 2023 with empirical observations, particularly in immersive learning and the extension of traditional learning. Anti-COVID-19 policies have complicated the situation by diversifying risks rather than mitigating them (García et al., 2019). Despite the potential for immersive learning to thrive in virtual classrooms, the lack of expertise has led to the continued use of traditional teaching methods, such as PowerPoint presentations. Anxiety stemming from the pandemic further hampers immersive learning and reinforces reliance on traditional approaches. Consequently, significant disparities are expected between the structures outlined in literature and the realities observed in this study.

METHOD

A study was conducted involving 100 students (average age 21.3, standard deviation 3.2, and average monthly income 9,987.00 pesos, with a standard deviation of 765.34 pesos). The study aimed to explore the students' engagement with various technologies, platforms, and virtual software. The research utilized the Carreón Knowledge Management Scale (2020), which assesses immersive learning through augmented reality, gamification, and interactivity. Respondents rated items on a scale from 0 to 5, indicating their likelihood of engagement.

Reliability analysis yielded an alpha value of .774 for the general scale and .754, .769, and .770 for the subscales of augmented reality, gamification, and interactivity, respectively. Factorial weights ranged from .446 to .948, indicating validity. The study adhered to APA guidelines for research involving human subjects, with respondents contacted via institutional email and assured of confidentiality and non-remuneration.

Data were collected, processed using JASP version 16, and analyzed for reliability, validity, and other statistical measures. The findings aimed to compare the theoretical structure of knowledge management with empirical observations, with values near unity indicating linearity, co-linearity, and multicollinearity, and values close to zero suggesting a spurious relationship. Concept homogenization was achieved through focus groups and the Delphi technique.

RESULTS

The fundamental eigenvalues play a crucial role in analyzing the correlations between factors and indicators, aiming to establish a concise equation explaining knowledge management dimensions. Notably, this analysis reveals that the 24 observations or indicators primarily cluster around two key factors, deviating from the commonly proposed three-dimensional structure found in literature, which includes augmented reality, gamification, and interactivity.

In the context of digital culture, knowledge management embodies immersive learning aimed at skill and knowledge acquisition, with a focus on representing processes and products (Jacinto & Lirios, 2022). Within this framework, the computational skills perspective emphasizes the necessity of representing information to facilitate its transformation into actionable data. Once information processing becomes ingrained in the culture, educational settings can replicate the information market dynamics through immersive learning dimensions, thus fostering comprehensive academic, professional, and vocational training cycles. The analysis indicates both positive and negative relationships among factors, as well as significant and spurious associations. While one factor predominates, its lack of association with the other two factors suggests a dual structural framework. In the context of COVID-19, knowledge management involves learning via augmented reality, particularly in scenarios such as risk exposure to cultivate a digital risk-preventive culture, exemplified by discouraging behaviors like mask reuse (Bustos Aguayo, Juárez Nájera & García Lirios, 2022). Conversely, gamification and interactivity are more commonly utilized in disseminating preventive strategies like isolation and social distancing.

Further examination through adjustment and residual values indicates no rejection of the null hypothesis concerning significant differences between theoretical and observed structures. Essentially, the exploration reveals a three-factor model of knowledge management, where augmented reality learning stands out but remains disconnected from gamified and interactive learning approaches. From the perspective of computational skills, augmented reality facilitates the representation of objects and spatial relationships (Sánchez et al., 2022). This observation, in conjunction with the literature spanning 2019 to 2023, suggests that the sampled population reflects the impact of anti-COVID-19 policies, emphasizing distancing and confinement strategies. In essence, the surveyed sample embodies the necessary representations and skills crucial for COVID-19 prevention, which can be effectively learned through augmented reality technologies.

DISCUSSION

This research contributes to understanding knowledge management within the context of the pandemic, specifically focusing on students from a public university in central Mexico. The study reveals a three-factor structure, with augmented reality learning emerging as predominant, while gamification and interactivity are not as prominent. These findings diverge from previous reports, which suggested that perceptions of benefits, risks, and intentions would drive knowledge management during exceptional circumstances.

Knowledge management is crucial for fostering innovation and community responses to local challenges. In times of crisis like the pandemic, entrepreneurial and innovative behaviors, along with immersive learning, become indicative of the community's response. Knowledge management, intertwined with immersive learning, guides entrepreneurship and innovation by leveraging learning capacities and resources associated with community behaviors.

Factors influencing collective responses to the pandemic can be understood through two processes: Bottom Up, driven by civil influence, and Top Down, influenced by policies like distancing and confinement. The impact of anti-COVID-19 policies on knowledge management underscores the need for further exploration, particularly in understanding the relationship between habitus and different approaches.

However, while augmented reality appears to dominate over gamification and interactivity in the current study, this preference might reflect a tendency towards risk aversion, possibly influenced by the pandemic's context. Future research should delve into the immersive learning dynamics within virtual classrooms to elucidate its role in risk communication and prevention strategies.

Immersive learning, exemplified by augmented reality, presents diverse opportunities for knowledge management. However, its long-term effects on intellectual capital formation remain uncertain. It is plausible that

immersive learning serves as a complement rather than a sole method, necessitating comprehensive models to understand its impact within containment strategies and educational frameworks.

CONCLUSION

The study aimed to investigate how knowledge management is manifested in immersive learning within the virtual classroom in light of anti-COVID-19 measures. The findings support the existence of three key learning aspects facilitated by augmented reality, gamification, and interactivity. While acknowledging the prominence of community responses to risks, the study suggests expanding the model to anticipate hybrid learning approaches in entrepreneurship and innovation using immersive technology. When it comes to translating knowledge management into immersive learning, emphasis is placed on augmented reality, particularly regarding risk prevention. The adoption of confinement and distancing measures reflects a swift understanding of contagion risks among users. However, the utilization of anti-COVID-19 tools like masks and gloves remains limited due to cost implications. Therefore, immersive learning via augmented reality prompts discussions on the scale and mitigation of infections, illnesses, and fatalities. Yet, wider dissemination of risk prevention through augmented reality may diminish skills in opportunism, optimization, and innovation. If augmented reality precedes exposure to risks, immersive learning might not effectively prevent COVID-19 infections, illnesses, and deaths. As immersive learning operates alongside collaborative and critical thinking approaches, knowledge management during the pandemic era may leverage gamification, interactivity, and augmented reality, provided they are perceived as user-friendly and beneficial.

Regarding pandemic risk prevention, knowledge management utilizes immersive learning and augmented reality tools to translate skills and knowledge effectively. The educational framework, influenced by confinement measures, highlights the integration of additional learning styles into immersive content delivery in virtual classrooms.

REFERENCES

- Aguayo, J.B., Lirios, C.G., & Nájera, M.J. (2021). [Validity of a habitus model of coffee entrepreneurship](#). *SUMMA. Revista disciplinaria en ciencias económicas y sociales*, 3(1), 1-21.
- Aldana-Balderas, W.I., Espinoza-Morales, F., Hernández-Valdés, J., & García-Lirios, C. (2018). [Specification of a model for the study of collaborative networks in a knowledge producing university](#). *Civilizar Ciencias Sociales y Humanas*, 18(35), 91-102.
- Bustos-Aguayo, J.M., Juárez-Nájera, M., & Lirios, C.G. (2022). [Review of entrepreneurship in the COVID-19 era](#). *Revista Ingenio*, 19(1), 60-66.
- Campas, C.J.Q., Aguayo, J.M.B., Nájera, M.J., Mojica, E.B., & Lirios, C.G. (2020). [Exploratory Factor Structural Model of the Perception of Mobility in Bikeways](#). *Journal of Educational Psychology-Propósitos y Representaciones*, 8(1), e422.
- Campas, C. Y. Q., Guillén, J.C., Bustos-Aguayo, J.M., Sánchez, A.S., Morales, F.E., & Lirios, C.G. (2022). [Ecocentric Governance: Sustainability Between the Availability of Resources and Needs](#). *Jurnal Bina Praja: Journal of Home Affairs Governance*, 14(1), 147-158.
- Espinoza Morales, F., Hernández Valdés, J., Carreón Guillén, J., García Lirios, C., Juárez Nájera, M., & Bustos Aguayo, J.M. (2022). [Tutoring Model 4.0 and development of research protocol](#).
- García Lirios, C. (2021). Vocational training in the post-COVID-19 era. *Education and Health Scientific Bulletin Institute of Health Sciences Autonomous University of the State of Hidalgo*, 9(18), 42-47.
- García Lirios, C., & Bustos-Aguayo, J.M. (2021). [Diseño y evaluación de un instrumento para medir el uso de internet en la era COVID-19 \(Design and Evaluation of an Instrument to Measure Internet Use During the COVID-19 Era\)](#). *Revista CEA*, 7(14).
- García Lirios, C., Carreón Guillén, J., & Hernández Valdés, J. (2017). Governance of Human Development: Contrasting a model of the perceptual determinants of the intention to use the Internet in users of a public library in MexicoCity. *Interconnecting Knowledge*, [S. 1.], no. 3.
- García Lirios, C., Carreón Guillén, J., Rincón Ornelas, R.M., Bolívar Mojica, E., Sanchez Sánchez, A., & Bermudez Ruiz, G. (2019). [Contrast of a knowledge management model in a public university in central Mexico](#).
- Guillén, J.C., Valdés, J.H., Flores, M.D.L.M., Varela, B.L.R., & Lirios, C.G. (2015). [Contraste De Un Modelo De Ciberconsumo](#). *Xihmai*, 10(19).
- Jacinto, O.A.D., & Lirios, C.G. (2022). [Digital Activism in the COVID-19 era](#). *Jurnal Bisnis, Manajemen, Dan Ekonomi*, 3(3), 147-155.
- Lirios, C.G. (2022). [Modelando la gestión e incubación del talento](#). *Interconectando Saberes*, (13), 59-66.

- Lirios, C.G. (2023). [EXPLORATORY FACTOR MODEL OF KNOWLEDGEMANAGEMENT](#). *IPHO-Journal of Advance Research in Social Science and Humanities*, 1(08), 20-27.
- Lirios, C.G. (2023). [EXPLORATORY FACTOR MODEL OF KNOWLEDGEMANAGEMENT](#). *IPHO-Journal of Advance Research in Social Science and Humanities*, 1(08), 20-27.
- Lirios, C.G., Aguayo, J.M.B., & Vázquez, F.R.S. (2022). [The agenda and framing of water problems in Mexico City in the press from 2019 to 2022](#). *Anuario del Conflicto Social*, (13).
- Muñoz, E.M., Guillén, J.C., Sánchez, A.S., Morales, F.E., Salazar, F.A., Pacheco, C.B., & Soto, M.L.Q. (2019). [Hybrid determinant model of the coffee entrepreneurship](#). *Interconectando Saberes*, (8).
- Rincón, O.C., Molina González, M.D.R., Mojica, E.B., Guillén, J.C., Lirios, C.G., & Rosas Ferrusca, F.J. (2022). [Governance strategy for consensus expectations of students at a public university to return to classes interrupted by the pandemic](#). *Revista De La Facultad De Derecho Y Ciencias Políticas*, 52(136), 319-338.
- Sánchez sánchez, A., Espinoza morales, F., Quiroz campas, C.Y., Sandoval vazquez, F.R., Carreón guille J., bustos-aguayo, J. M., García-lirios, C., Meriño-cordoba, V.H. (2023). Meta-analysis of perceptions of occupational hazards in the covid-19 era.

Received 07-Feb-2024, Manuscript No. AEJ-24-14589; **Editor assigned:** 09-Feb-2024, PreQC No. AEJ-24-14589(PQ); **Reviewed:** 19-Feb 2024, QC No. AEJ-24-14589; **Revised:** 23-Feb-2024, Manuscript No. AEJ-24-14589(R); **Published:** 26-Feb-2024