Educational innovation management in a Post Covid-19 Epidemic of higher education in Zhoukou under Henan Province

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ABSTRACT

The objectives were 1) to explore the components of educational innovation management in higher education and 2) to propose guidelines for educational innovation management in higher education in Zhoukou, Henan Province, in the post-COVID-19 era. employing a mixed-method approach. The population consisted of 2,408 instructors from five higher education institutions in Zhoukou, Henan Province, during the 2022 academic year. The sample was 331 instructors using Krejcie and Morgan's table, selected through stratified random sampling. Purposive sampling was used to select 17 key informants for interviews. Key informant validation was conducted using the connoisseurship approach, involving 9 experts. The guidelines were confirmed based on their input. The research instruments included a questionnaire using a five-point Likert scale and a validation checklist. Statistics for quantitative data analysis were descriptive, and content analysis for qualitative data from in-depth interviews and expert evaluations. The results revealed that 1) the components of educational innovation management in higher education in Zhoukou, Henan Province, in the post-COVID-19 era, consisted of four key elements; target innovation, curriculum innovation, organizational innovation, and scientific and technological innovation; and 2) the guidelines for educational innovation management comprised eight main strategies; optimizing educational management, enhancing administrators' learning motivation, managing and developing learning spaces, managing knowledge dimensions, improving management institutions, establishing and strengthening the management guarantee mechanisms in higher education, clarifying management objectives, and ensuring the ultimate goal of comprehensively improving the quality of educational innovation management in higher education is achieved.

Keywords: Educational Innovation Management, Post Covid-19 Epidemic, Higher Education, Zhoukou, Henan Province

Introduction

In December 2019, a viral outbreak of unexplained pneumonia occurred in Wuhan, China. On January 9, 2020, the World Health Organization (WHO) officially announced the discovery of a novel coronavirus. SARS-CoV-2 was identified as the causative agent of this infectious respiratory disease, later named COVID-19 (coronavirus disease). The success of social distancing and confinement measures in China, as well as strong recommendations from the World Health Organization, encouraged many other countries to implement similar policies. As of April 1, 2020, more than 3.4 billion people—or 43% of the world's population—had been placed under lockdown in over 80 countries and territories worldwide. These measures had an immediate and profound impact on higher education (Zhang, 2021).

The pandemic delivered unprecedented shocks to all regions of the world. Thomas Friedman compared its historical impact to all organization in time. In higher education, the COVID-19 pandemic served as a major historical turning point. The widespread adoption of online teaching completely disrupted traditional face-to-face learning in universities. In addition, the public health crisis triggered general anxiety and significantly affected students' mental health. Colleges and universities were no longer just institutions for talent development, research, and community service—they were now also key players in epidemic prevention and social stability (Sun, 2021).

In response, China's higher education system began transforming crisis into opportunity. Institutions accelerated the development of MOOCs, incorporated epidemic prevention into political education, and began documenting effective practices for improving university governance. This period also emphasized the need to guide students in developing positive societal values. According to Liu (2020), uncertainty in university governance can be categorized into three areas: uncertainty in decision-making, uncertainty in implementation, and uncertainty in the effects of implemented decisions. Therefore, this study adopts these three areas of uncertainty as a theoretical framework and uses a case study approach to explore the challenges and strategies for resilient educational innovation management during the pandemic.

This research on educational innovation management in the post-COVID-19 era in higher education institutions in Zhoukou, Henan Province, focuses on how university leaders manage through uncertainty. Effective oversight mechanisms are essential to ensure that innovation management adapts to changing circumstances. The study highlights three dimensions of uncertainty in university governance: uncertainty in decision-making, uncertainty in implementation, and uncertainty

in outcomes (Liu, 2020). Whether under ongoing pandemic conditions or in a post-epidemic recovery, educational innovation must continue to evolve in response to these uncertainties. Additionally, Sun (2021) emphasized that universities must expand their roles beyond teaching and research by actively participating in epidemic prevention and serving as essential organizations for maintaining social stability, making innovation management even more vital in the current era.

The importance of educational innovation management in Zhoukou's higher education context lies in the region's rapid growth and its need to align with national development strategies. Educational institutions in Zhoukou play a critical role in workforce development and social transformation. Without adaptive innovation management, these institutions risk falling behind in quality and relevance. Furthermore, the COVID-19 crisis exposed existing gaps in digital infrastructure, teaching models, and crisis responsiveness. Addressing these gaps through strategic innovation is not only timely but necessary for achieving long-term institutional resilience and effectiveness. This research proposes a set of actionable guidelines to help universities navigate uncertainty, reform policies, and implement flexible, future-ready management strategies in the post-COVID-19 era.

Purposes

1. To explore the components of educational innovation management in higher education in Zhoukou, Henan Province, in the post-COVID-19 era.

2. To propose guidelines for educational innovation management in higher education in Zhoukou, Henan Province, in the post-COVID-19 era.

Benefit of Research

This research on educational innovation management in the post-COVID-19 era aims to enhance cultural judgment among teachers and students, promote students' independent learning and self-management skills, and strengthen home–university co-education. It also seeks to address key educational and management challenges in Henan Province, contributing to improved leadership in higher education.

Research Process

Step 1: Conduct a comprehensive literature review and analyze related research to identify the components of educational innovation management in higher education institutions in Zhoukou, Henan Province, in the post-COVID-19 era.

Step 2: Develop semi-structured interview questions based on the literature review from Step 1. Use the interview findings to design a questionnaire for data collection and analyze.

Step 3: Apply the connoisseurship approach by engaging nine experts to propose and verify the guidelines. The guidelines were finalized based on expert input and obtained through purposive sampling.

Population, Sample, and key informants

The population consisted of 2,408 instructors from five higher education institution Using Krejcie and Morgan (1970) and stratefied random sampling, a sample of 331 instructors. Purposive sampling was used to select 17 key informants for interviews, comprising 11 administrators and instructors, and six students. Key informant validation was conducted using the connoisseurship approach, involving nine experts to verified guidelines and confirmed.

Instruments and data analysis

Instruments

1. Semi-structured Interview Guide: A semi-structured interview form was developed based on the literature review to explore components and practices of educational innovation management in higher education during the post-COVID-19 era in Zhoukou, Henan Province, China. This tool was used to gather qualitative data from 17 key informants, including administrators and instructors.

2. Questionnaire: questionnaire was constructed from the findings of the literature review and interview analysis. It was used to collect quantitative data from a stratified random sample of 331 instructors. The instrument was questionnaire to measure the level of educational innovation management and was analyzed using descriptive statistic.

3. The connoisseurship approach was employed with nine experts to verify and propose guidelines for educational innovation management in higher education in Zhoukou, Henan Province, in the post-COVID-19 era.

Data analysis

1. Qualitative Analysis. Content analysis was conducted on the data collected from in-depth interviews. The responses were coded and categorized based on recurring themes and frequencies to identify key components and challenges of educational innovation management.

2. Quantitative Analysis: Data from the questionnaire survey were analyzed using descriptive statistics (frequency, mean, percentage, and standard deviation) and Exploratory Factor Analysis (EFA) to identify the underlying dimensions of educational innovation management.

3. Connoisseurship. A moderated focus group discussion was conducted to validate and refine the proposed guidelines. Nine experts participated voluntarily and provided feedback based on their expertise. This step helped ensure the practical relevance and clarity of the final guidelines.

Conclusion and discussion

Conclusion

1. Research results section 1

A content analysis of the literature review and related studies, along with an analysis of data collected from the sample questionnaire, was conducted to examine the influence of educational innovation management in higher education after the COVID-19 pandemic. Based on the review of literature and prior research, eight main variables and 39 sub-variables were identified. Using these variables as a foundation, the researcher developed a semi-structured interview guide and conducted interviews with 17 key informants, all of whom were instructors involved in educational innovation management in higher education.

The demographic analysis of the 331 respondents (n = 331) offers a clear overview of the participant profile in this study on educational innovation management. A total of 203 respondents were male (61.3%) and 128 were female (38.7%). In terms of age, 226 participants (68.3%) were between 20 and 44 years old, while 105 participants (31.7%) were aged 45 and above. Regarding educational background, 90 respondents (27.2%) held a bachelor's degree, whereas 241 (72.8%) held qualifications higher than a bachelor's. As for professional experience, 232 individuals (70.1%) had less than 15 years of work experience, while 99 individuals (29.9%) had 15 years or more. This distribution reflects a predominantly young, well-educated, and early- to mid-career group, offering valuable insights into perspectives on educational innovation in higher education. Questionnaires result 1-5, as below.

1. The results from indicate that the current situation in educational innovation management at the university, in the post-COVID-19 era, is at the highest level overall ($\bar{x}$ = 4.74, S.D. = 0.88), reflecting a strong institutional commitment to innovation. The three highest-ranking items demonstrate key strengths: first, the degree of support for the key success factors prioritized by university administrators (Q5) had the highest mean ($\bar{x}$ = 4.90, S.D. = 0.91), showing that leadership is highly supportive and strategic in fostering innovation. Second, brainstorming opinions on current management measures of educational innovation (Q3) scored a high mean of mean ($\bar{x}$ 4.80, S.D. = 0.86), indicating active participation and collaborative input in shaping innovation practices. Third, the implementation of educational innovation and resource organization (Q4) received a mean of ($\bar{x}$ =4.70, S.D. = 0.90), highlighting the university's effectiveness in mobilizing and managing key resources—human, financial, material, and managerial—to support innovation. These results reflect a strong post-pandemic response through strategic leadership, collaborative input, and resource integration to enhance educational innovation.

2. The results from Table 4.4 demonstrate that the components of Educational Innovation Management in Zhoukou higher vocational higher education institutions are perceived at a highest level overall ($\bar{x}$ = 4.76, S.D. = 0.89), indicating a strong and systematic approach to innovation in the post-COVID-19 context. Focusing on the three highest-ranking components, the first is Q (10) – "the degree of support for the key success factors to which the administrators of the university attach importance to educational innovation management" – which received a mean score of ($\bar{x}$ = 4.90, S.D. = 0.89). This reflects a strong commitment from university leadership, underscoring that strategic direction and administrative prioritization are central to innovation success. The second highest component is Q (12) – "the degree of support for the establishment of research topic courses for educational innovation management" – with a mean of ($\bar{x}$ = 4.85, S.D. = 0.91). This result emphasizes the university's emphasis on embedding innovation into research and academic development, which enhances both knowledge creation and instructional quality. The third is Q(7) – "understanding the extra points of the educational innovation management system of your university" – scoring ($\bar{x}$ = 4.82, S.D. = 0.85), suggesting that faculty and stakeholders possess a clear awareness of the system's distinctive strengths and added value, which is vital for effective and consistent implementation.

These high scores collectively illustrate that the university not only emphasizes leadership and research in innovation but also cultivates deep understanding among its personnel, creating a strong foundation for sustained educational transformation.

3. The results the Functional and Structural Educational Innovation Management at Zhoukou higher vocational higher education institutions is perceived at the highest level overall ($\bar{x}$ = 4.77, S.D. = 0.89), indicating a strong institutional response to the demands of post-COVID-19 educational transformation. The three highest-ranking components provide key insights into this strength. The highest-rated item is Q (22) – "the degree of support for the structural adjustment of university education innovation management" – with a mean score of ($\bar{x}$ = 4.95, S.D. = 0.91), reflecting the institution's robust commitment to reforming and adapting its structure to better support innovation in the new educational landscape. The second is Q (21) – "your understanding of the function of the innovation management of university education in the epidemic situation" – which scored ($\bar{x}$ = 4.80, S.D. = 0.88), showing that stakeholders clearly understand the functional role of innovation management during crises, an essential factor for effective adaptation and resilience. The third is Q (19) – "your recognition of the current capabilities of innovation management in university education that has played a role in the

pandemic" – with ($\bar{x}$ = 4.75, S.D. = 0.90), indicating a high level of appreciation for the system's effectiveness and contribution during the COVID-19 crisis.

These findings together suggest that the university has successfully aligned both its organizational structure and functional understanding of innovation management to address the evolving challenges of higher education, making it well-positioned for sustainable innovation moving forward.

4. The results from the Best Practice of Educational Innovation Management in Zhoukou higher vocational higher education institutions is rated at the highest level overall ($\bar{x}$ = 4.78, S.D. = 0.90), reflecting strong implementation and perception of best practices in the post-COVID-19 era. The highest-ranked item is Q (27) – "recognition of student-centered education innovation management as a best practice" – with a mean of ($\bar{x}$ = 4.90, S.D. = 0.89), indicating a strong emphasis on learner-focused approaches, which align with modern educational paradigms that prioritize engagement, autonomy, and adaptability. The second is Q (26) – "the importance of managers in the practice of educational innovation management" – scoring ($\bar{x}$ = 4.85, S.D. = 0.85), highlighting the vital role of educational leadership in driving and sustaining innovative practices within institutions. The third is Q (24) – "the importance of university teaching methods in the practice of educational innovation management" – with a mean of ($\bar{x}$ = 4.73, S.D. = 0.93), which shows a strong awareness of the need to innovate pedagogical approaches as part of overall educational reform.

Together, these results underscore that student-centered learning, managerial leadership, and innovative teaching methods are key pillars of best practice in educational innovation management, ensuring responsiveness to both learner needs and institutional development goals.

5. The findings from the key success factors of Educational Innovation Management in Zhoukou higher vocational higher education institutions are rated at the highest overall level ($\bar{x}$ = 4.88, S.D. = 0.90), indicating a strong institutional focus on the foundational drivers that contribute to successful innovation. The highest-ranked factor is Q (29) – "the importance of management awareness in the management of educational innovation" – with a mean of ($\bar{x}$ = 4.95, S.D. = 0.89). This reflects the crucial role of informed, proactive, and innovation-oriented leadership in shaping and guiding educational transformation. When management understands the importance of innovation, they are better positioned to allocate resources, design strategies, and foster a culture that supports sustainable change. The second-ranked item is Q (28) – "degree of recognition of

university administrators as key success factors" – scoring $\bar{x}$ = 4.90, S.D. = 0.91, which emphasizes the importance of administrators' leadership roles. Their decisions, vision, and support directly influence the success of innovation policies and practices across the institution. The third-ranked factor is Q (30) – "the importance of doing a good job of student work in the management of educational innovation" – with $\bar{x}$ = 4.80, S.D. = 0.90, showing that student services and support mechanisms are also vital. Effective student engagement ensures that innovation meets learners' needs and contributes to improved outcomes and satisfaction.

In summary, the most critical success factors lie in the awareness, leadership, and active involvement of management, along with a strong student-centered focus, all of which form a solid foundation for advancing educational innovation.

6. The results in the institutional assessment of educational innovation management is perceived at a highest level overall, with a mean score of ($\bar{x}$ = 4.66, S.D.=0.89). The highest-ranked item is the uniqueness of the overall educational innovation management assessment system (Q39), with a mean of ($\bar{x}$ = 4.70, S.D. = 0.91), indicating a strong consensus on the importance of having a distinct evaluation framework. The second-ranked item is the use of managers' salaries as a criterion for assessment (Q37), with a mean of ($\bar{x}$ = 4.65, S.D. = 0.89), reflecting agreement on the value of performance-based incentives in innovation management. The third-ranked item is the recognition of teacher attendance awareness as an assessment standard (Q38), with a mean of ($\bar{x}$ = 4.65, SD. = 0.88), showing that consistent teacher presence is also a significant factor in evaluating innovation. These results underline that effective institutional assessments after the COVID-19 pandemic should balance structural uniqueness, managerial accountability, and faculty involvement.

According to the first research objective, in-depth interviews were conducted with 17 key informants to explore the challenges faced in the post-epidemic period and to develop the components of educational innovation management in higher education institutions in Zhoukou, Henan Province. The research process and findings are summarized as follows: Step 1: The researcher conducted in-depth interviews with 17 key informants, including university administrators and instructors, to gather qualitative data on the problems and needs related to educational innovation management after the COVID-19 epidemic. Step 2: The interview data were carefully transcribed, coded, and analyzed using content analysis to identify recurring themes and categories relevant to innovation management in the higher

education context. Step 3: Based on the frequency from interview of 17 key informants, the researcher summarized and prioritized the components as table 1 follow.

Table 1 Educational innovation management in higher education institution in Zhoukou

Interview summarized	n=17
1. The current management content	
1.1 The complexity of the management environment is highlighted	16
1.2 Ineffective management	16
1.3 Unclear management objectives	16
1.4 Management learning space is narrow	15
1.5 Manage one-dimensional knowledge transfer	15
1.6 Teaching management content is indoctrinated	14
1.7 Managers have varying levels of competence	14
1.8 Lack of motivation for managers to learn	13
2. Improving the management ways	
2.1 Innovation management methods	16
2.2 Characteristic management	15
2.3 Development management	14
2.4 The combination of online and offline	14
2.5 Innovate the education management model	13
3. Actively implement the current policy measures	
3.1 Renewal of teaching concepts	13
3.2 Strengthen the management ability	13
3.3 The school restructured the curriculum	12
3.4 Implement the management effectiveness and evaluation of course content	12
3.5 Refine the understanding and service of students under management	11
3.6 Strengthen the formulation of educational management plans and policies	11
4. Awareness of education innovation management	
4.1 Management innovations awareness	15
4.2 Characteristic management concepts awareness	14
4.3 Innovative quality of cultivate management awareness	13
4.4 Educate the mind and lead the awareness	13
4.5 Moral personality management awareness	12
5. the other management guidance	

5.1 Perfect principles of management	16
5.2 Method of management reformation	16
5.3 Draw up personnel manager training	15
5.4 Perfect management standard	13

Table 1. Based on the in-depth interviews with 17 key informants, the findings reveal several critical aspects of educational innovation management in higher education in Zhoukou, Henan Province, during the post-COVID-19 era. The current management content was reported to be problematic, with 16 participants highlighting the complexity of the management environment, ineffective practices, and unclear objectives. Many also noted limitations in learning spaces (15 responses) and the one-dimensional nature of knowledge transfer. Teaching management was often described as overly indoctrinated (14), with inconsistent competency among managers and a lack of motivation to pursue further development. To improve management approaches, the interviewees recommended adopting innovative and characteristic methods (16 and 15, respectively), focusing on development-oriented strategies (14), and integrating online and offline management models. Policy implementation was seen as essential, with emphasis on renewing teaching concepts, strengthening capabilities (13 responses), restructuring curricula (12), and refining both course evaluation and student services. Additionally, participants emphasized the importance of fostering awareness around innovation in management, including moral and characteristic aspects (13–15 responses). Lastly, the need for clearer management principles and reformative methods was strongly expressed (16 responses), alongside the development of structured training and standards for educational managers. These insights collectively form the basis for proposing comprehensive and context-specific management guidelines.

2. Research results section 2

The connoisseurship approach by engaging nine experts to propose and verify the guidelines. Nine expert verified and guidelines as Table 2.

Table 2. Connoisseurship result

Connoisseurship to propose and verify the guidelines (9 experts)											
	Item	Expert1	Expert2	Expert3	Expert4	Expert5	Expert6	Expert7	Expert8	Expert9	n=9
1	Improve the university innovation management platform	✔	✔		✔	✔	✔		✔		6
2	Promote the practice of innovation management in higher education.	✔		✔	✔	✔	✔	✔			6
3	Improve the innovation management mechanism of universities.	✔	✔	✔	✔	✔					5
4	Improving the concept of innovation management in Higher Education	✔		✔	✔	✔		✔			5
5	Understanding the current situation of innovation management in Higher education	✔		✔	✔		✔				4
6	Understand the factors of innovation management in Higher education	✔			✔	✔		✔			4
7	Understanding the current situation of innovation management in Higher education	✔		✔					✔	✔	4

Based on Table 2, which presents the connoisseurship evaluation by nine experts, the researcher identified key priorities to enhance innovation management in higher education. The findings show that the most frequently agreed-upon strategies include improving the university innovation management platform (6 out of 9 experts),

promoting the practice of innovation management in higher education (6), and enhancing the innovation management mechanisms in universities (5). Additionally, improving the conceptual understanding of innovation management (5), and gaining insights into the current situation and influencing factors (each with 4 expert endorsements) were also considered essential.

These findings support a multi-faceted approach to strengthening innovation management, as further elaborated by the experts. First, there is a need to cultivate awareness of educational innovation management among higher education administrators. This can be achieved through increased government support and collaboration among stakeholders—including schools, families, and government agencies—to establish joint training mechanisms and long-term development plans. Reforming college-level innovation management structures and improving policy guidance were also emphasized.

Second, innovation management must balance theoretical instruction with practical application. Experts suggest developing structured curricula focused on competency-based training, improving the innovation capabilities of administrators through formal coursework, and enhancing institutional systems that support such innovations.

Third, strategic guidance is critical. The government should align educational innovation efforts with local socio-economic characteristics by appointing qualified experts, forming local education management committees, and tailoring training goals to regional needs. Establishing a robust assessment and monitoring system is also necessary. This includes clarifying roles and responsibilities of administrators, setting operational standards, and ensuring transparent oversight and evaluation by designated innovation management bodies.

Overall, the convergence of expert opinions underscores the importance of systemic reform, capacity building, and policy-driven innovation to advance higher education management in the post-pandemic context.

The component of educational innovation management mainly uses quantitative analysis methods, and after descriptive statistical analysis such as average and variance, the target innovation, curriculum innovation, organizational innovation, and technological innovation are studied, and their effective components for educational innovation management are determined. Finally, the qualitative analysis method discussed by the expert group was adopted to analyze the educational management innovation, and a guideline for educational innovation management was

developed. Data analysis framework diagram for Educational Innovation Management in a Covid-19 epidemic of Higher Education in in Zhoukou under Henan Province.

The figure1. Show the framework of Educational Innovation Management in Universities in the post-COVID-19 epidemic, highlighting the interconnected components and driving factors. Here's a concise summary;

1) Current situation. The foundation of the model starts with an assessment of the current state of Educational Innovation Management in universities after COVID-19, which influences and is influenced by other components.

2) Core components of Innovation Management, categorized into four main components: (1) Goal innovation, (2) Curriculum innovation, (3) Organizational innovation, and (4) Technological innovation. These form the structural basis for managing change and development in higher education.

3) Role of leadership and faculty. Innovative management from leaders and teachers is crucial. It supports: (1) Functional and structural adjustments in innovation management, (2) Identification of best practices, (3) Understanding of key success factors, (4) Development of countermeasures for post-epidemic challenges, and (5) Promotion of awareness regarding educational innovation

4) Institutional assessment, all innovations and strategies are subjected to institutional assessment, which helps close the feedback loop and ensures accountability and continuous improvement.

5) Final integration, all elements contribute to an overarching of innovative management, ensuring a systematic, multi-level approach that aligns with institutional goals, practices, and post-pandemic recovery.

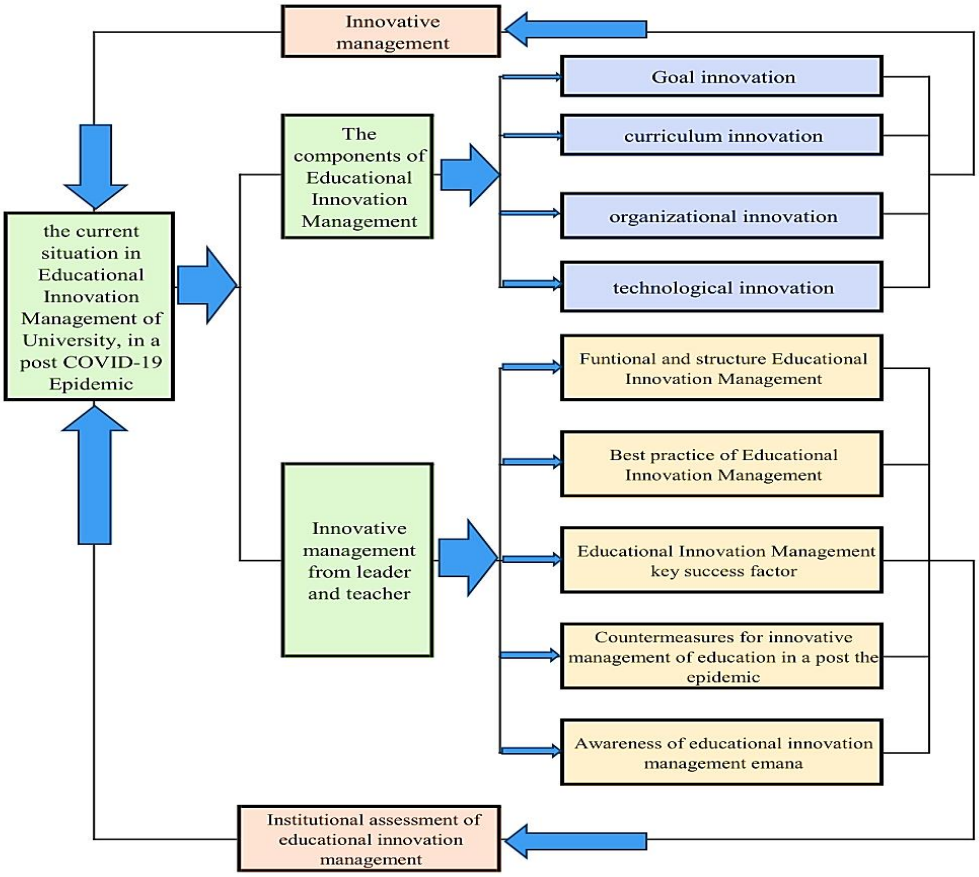

Figure 1. Framework of Educational Innovation Management in Universities in the post-COVID-19 epidemic, highlighting the interconnected components and driving factors

Discussion

Based on the research findings from objectives 1 and 2, the framework for Educational Innovation Management in universities during the post-COVID-19 period can be comprehensively discussed through four core components: goal innovation, curriculum innovation, organizational innovation, and technological innovation.

First, goal innovation emphasizes aligning institutional goals with post-pandemic recovery and community needs. Andreas Schleicher (2020) points out the urgency for education systems to redefine their missions and embrace adaptability in times of crisis. Similarly, David Maurrasse (2020) highlights how universities must support local development goals, requiring a clearer innovation direction that includes stakeholder collaboration.

Second, curriculum innovation is critical for integrating theory and practice in educational design. Chen Wei (2019) and Hua Qiang (2020) suggest restructuring teaching strategies through competency-

based and blended learning, supported by digital systems. These innovations ensure that academic programs are responsive to student needs and societal shifts.

Third, organizational innovation involves reforming structures and administrative processes to better facilitate innovation. As Ase Gornitzka (2019) explains, organizational agility is essential during crises. Leadership commitment, faculty involvement, and policy realignment must be coordinated. Chen Yue (2020) and Li Xu (2015) further advocate for web-based academic management systems to streamline innovation practices within institutions.

Fourth, technological innovation remains indispensable. Digital tools and platforms must be integrated into every facet of university management. Zhou Yue (2020) and Silvia Gomez Recio (2020) emphasize how robust digital ecosystems support learning continuity and administrative efficiency, while Hu Shanshan (2020) demonstrates the role of online quality assurance systems in maintaining academic standards.

The integration of these four components—supported by expert insights and empirical findings—forms a dynamic system that drives educational innovation. Institutional assessment mechanisms ensure feedback loops that refine practices continuously. This multi-level approach, grounded in both qualitative and quantitative findings, addresses post-pandemic challenges and reflects a forward-looking educational management paradigm (Li Hailong, 2020; Song Lei, 2020; Zhang Zhong, 2021; Fuan, 2020).

Recommendations

Recommendation for policies formulation

1. Strengthen leadership capacity. Enhance the strategic role and innovation management skills of university administrators.
2. Build an innovation ecosystem. Establish an integrated system that promotes sustainable and collaborative educational innovation.
3. Promote student-centered practices. Implement innovative, practice-based, and student-focused teaching methods.
4. Improve assessment systems. Develop robust evaluation mechanisms to ensure quality and effectiveness in innovation management.

Recommendation for practical application

1. Conduct training programs for University Leaders. Organize workshops and continuous professional development to build competencies in innovation leadership and strategic planning.
2. Develop collaborative innovation projects. Encourage partnerships among faculty, students, and external stakeholders to

co-create and test innovative teaching models and educational technologies.

3. Implement innovation performance dashboards. Create digital tools to monitor, assess, and report progress in educational innovation, ensuring alignment with institutional goals and quality standards.

Recommendation for Further Research

1. Explore long-term impact of post-COVID educational innovation future studies should investigate how educational innovation management practices adopted during the COVID-19 pandemic have sustained or evolved in the long term across different types of universities.

2. Examine student and faculty perspectives. Research should focus on perceptions and experiences of students and faculty regarding the effectiveness and challenges of innovation management, which were not deeply addressed in the current study.

3. Compare innovation management across institutions. Comparative studies between public and private universities or across regions would help identify contextual factors that influence successful innovation management.

References

Chen, W. (2019). *Education and management innovation in a post the epidemic situation.* Qinghai University Press.

Chen, Y. (2020). Design and implementation of university academic affairs management system based on web services. *Journal of Educational Technology and Management, 12*(3), 44–52.

Erasmus. (2020). COVID-19 impact on higher education: Institutional and students' perspectives. *Journal of Higher Education Policy and Management, 42*(5), 430–444

Fuan, L. (2020). *Education management strategies in the context of COVID-19*. Education Press.

Gornitzka, A. (2019). *The university challenge – The role of research-intensive universities in crisis management.* Oslo University Press.

Li, H. (2020). *The challenges of the dual circulation pattern and the response of higher education*. China Education Press.

Li, H. (2020). *Shuang xun huan mo shi xia de gao jiao ying dui ce lüe [The challenges of the dual circulation pattern and the response of higher education]*. Beijing University Press.

Liu, W. (2020, May 4). *21st century education methods, educational atmosphere, learning styles and the relationship between teaching and learning*. https://www.people.cn

Liu, Y. (2020). *Research on the uncertainty of university governance under public emergencies*. Higher Education Press.

Schleicher, A. (2020). *The impact of COVID-19 on education – Insights from Education at a Glance 2020.* OECD Publishing. https://www.oecd.org/education/ the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf

Song, L. (2020). *Reforming university innovation systems after the epidemic*. Academic Affairs Press.

Sun, H. (2021). The role of universities in epidemic prevention and control: A case study of COVID-19. *Journal of Higher Education Research, 42*(3), 41–44.

Zhang, Z. (2021). *Impact of the COVID-19 pandemic on global education systems*. Educational Science Publishing House.

Zhang, Z. (2021). *Digital transformation in post-pandemic higher education*. Higher Education Research Publishing.

Zhou, Y. (2020). *The dilemma and solutions of online teaching in higher education—Starting from online teaching during the epidemic*. Educational Science Press.