

---

# 2025 International Conference on Economics, Management and Education Technology (ICEMET 2025)

Article

## Research on the Knowledge Sharing Theory Constructed by the Global Higher Design Education Community

Yao Xiao <sup>1,\*</sup> and Ying Sun <sup>2</sup>

<sup>1</sup> Hunan University of Technology, Zhuzhou, China

<sup>2</sup> Guangzhou Panyu District Shiqiaojin Valley Student School, Guangzhou, China

\* Correspondence: Yao Xiao, Hunan University of Technology, Zhuzhou, China

**Abstract:** Driven by globalization and digitalization, higher design education faces persistent challenges of uneven resource distribution, fragmented collaboration, and differentiated development levels across regions. Building a global higher design education community has therefore become a key strategy for integrating high-quality resources and promoting coordinated, sustainable development. Knowledge sharing theory provides the core conceptual and methodological support for ensuring the effective operation of such a community. This paper adopts literature research, case analysis, and systematic induction to explore the theoretical connotation, structural elements, and practical mechanisms of knowledge sharing in the context of global higher design education. It examines the roles, motivations, and capabilities of major actors, including teachers, students, and industry experts, and clarifies the types, characteristics, and sharing barriers of design education knowledge. Furthermore, it analyzes how institutional arrangements, cultural norms, and technological environments jointly shape knowledge flows and collaboration patterns. On this basis, the study proposes three practical paths: constructing incentive and trust-based mechanisms, coordinating physical and digital platforms for interaction, and cultivating an open, shared culture that supports long-term cooperation. Typical cases are used to summarize successful experiences and reveal existing problems in current practice. The findings enrich the theoretical system of knowledge sharing in design education and offer operational strategies for constructing a global higher design education community, contributing to the cultivation of high-quality talents with international vision, innovation capability, and cross-cultural communication competence.

**Keywords:** knowledge sharing; design education; higher education; globalization; digitalization; collaboration; cross-cultural communication

Received: 08 February 2026

Revised: 23 March 2026

Accepted: 07 April 2026

Published: 11 April 2026



**Copyright:** © 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

---

### 1. Introduction

As globalization continues to accelerate and digital technology becomes deeply integrated into various aspects of society, higher design education is undergoing profound transformations. Different countries and regions have developed unique concepts and systems for design education, shaped by their distinct histories, cultures, industrial demands, and educational traditions [1]. In this context, the establishment of a global higher design education community has emerged as a necessary step to integrate diverse educational resources and foster the coordinated development of design education worldwide. This initiative seeks to address the challenges posed by the evolving landscape of design education while promoting collaboration and mutual growth among stakeholders.

The envisioned community aims to unite design schools, educational institutions, industry organizations, and other relevant entities from across the globe to create an open, inclusive, and mutually supportive educational ecosystem. By establishing cooperative

mechanisms, sharing high-quality resources, and conducting joint research, the community seeks to enable its members to learn from one another, exchange experiences, and collectively tackle global challenges in design education. These challenges include adapting to changes in teaching models driven by digital transformation and meeting the new demands for cultivating design talents aligned with sustainable development principles [2]. The success and sustainability of this community hinge on the implementation of an efficient knowledge-sharing mechanism. As a core element for fostering interaction among members and driving knowledge innovation and value creation, the development of a robust theoretical framework for knowledge sharing is essential for the community's construction and long-term viability.

The application of knowledge-sharing theory in education provides both theoretical support and practical guidance for building a global higher design education community. Traditional education models often rely on one-way, closed knowledge transfer, where teachers act as the sole authority and impart knowledge to students in a top-down manner. In contrast, knowledge-sharing theory emphasizes the two-way flow and co-creation of knowledge, advocating for equal and open communication among teachers, students, and educational institutions. In the realm of design education, this approach can transcend institutional boundaries and facilitate the exchange and integration of diverse design concepts, teaching methodologies, and practical experiences across cultural contexts. For instance, initiatives such as teacher exchanges, student mobility programs, and collaborative curriculum development can integrate superior resources from different regions, exposing students to a broader spectrum of design knowledge and fostering diverse thinking approaches. This, in turn, helps cultivate design professionals with global perspectives and innovative capabilities. Furthermore, knowledge sharing serves as a catalyst for theoretical advancements and practical reforms in design education. By encouraging the exchange of experiences and intellectual dialogue among community members, new research directions and teaching strategies can emerge, injecting fresh energy into the evolution of design education practices.

An in-depth exploration of the theoretical foundations, critical components, and practical strategies for knowledge sharing in the context of building a global higher design education community is essential. Such analysis not only contributes to the enrichment and refinement of knowledge-sharing theory within the field of design education but also provides valuable theoretical and practical insights for advancing the quality and development of global design education. The implications of this endeavor are significant, offering both academic contributions and practical benefits that can drive innovation and collaboration in design education on a global scale [1, 3].

## **2. Overview of the Theory of Community Building and Knowledge Sharing in Global Higher Design Education**

### *2.1. The Connotation and Characteristics of the Global Higher Design Education Community*

The global community of higher design education represents a cohesive network formed by universities, institutions, and related entities worldwide that are committed to advancing higher design education. This community is built upon shared educational objectives and values, fostering collaboration through resource integration and knowledge exchange. It is characterized by three core attributes: openness, diversity, and collaboration. Openness is demonstrated by the community's ability to transcend geographical and institutional boundaries, welcoming members from various regions and backgrounds. Diversity is evident in the wide range of educational philosophies, teaching methodologies, and cultural contexts represented within the community. Collaboration underscores the importance of leveraging complementary strengths among members to achieve mutual growth and development. Establishing a global community for higher design education facilitates the pooling of high-quality educational resources on a global scale, encourages the exchange and fusion of design philosophies influenced by diverse cultural perspectives, and contributes to the enhancement of design education standards

worldwide. By fostering such a community, stakeholders can collectively address challenges, innovate practices, and elevate the discipline to new heights of academic and practical excellence [1, 4].

### 2.2. Application of Knowledge Sharing Theory in Education

The theory of knowledge sharing has evolved significantly, transitioning from a traditional knowledge transfer model to a modern knowledge co-creation model [5, 6]. Within the educational field, knowledge sharing exhibits distinct characteristics and offers substantial value. It emphasizes two-way interaction and collaborative creation among teachers and students, among peers, and across educational institutions. This approach fosters a dynamic exchange of ideas and promotes mutual learning. The value of knowledge sharing is evident in its ability to optimize the allocation of educational resources, enhance the overall quality of education, and nurture students' innovative thinking and collaborative skills. In the context of building a higher design education community, the application of knowledge sharing theory is particularly critical. It facilitates the circulation and innovation of design-related knowledge, thereby driving the sustainable development of community members. This dynamic process not only enriches the educational experience but also strengthens the collective growth and adaptability of the community.

## 3. Key Elements of Knowledge Sharing in Global Higher Design Education Community

### 3.1. Main Elements

The university faculty group plays a pivotal role in the process of knowledge sharing, as their motivation and ability significantly influence the effectiveness of such activities. Faculty members may engage in knowledge sharing driven by factors such as academic collaboration, professional growth, and a sense of social responsibility. Their ability to contribute effectively depends on their expertise in their respective fields, proficiency in communication and expression, and adeptness in utilizing information technology tools [7, 8]. Students, as active participants in the knowledge-sharing process, are not merely recipients of information but also creators and disseminators of knowledge. Through activities such as classroom discussions, collaborative projects, and peer-to-peer interactions, students can deepen their understanding and enhance their ability to apply knowledge in practical contexts. Furthermore, the involvement of external contributors, such as industry professionals, adds substantial value to the knowledge-sharing community. These experts bring real-world insights and advanced industry knowledge, enriching the content and broadening the scope of shared knowledge. Table 1 outlines the specific roles and functions of various participants in the knowledge-sharing ecosystem, highlighting their unique contributions to fostering a dynamic and collaborative academic environment.

**Table 1.** The roles and functions of different subjects in knowledge sharing

Subject Type	Role Positioning	Main Function
College Teacher	Knowledge provider, guide	Transfer professional knowledge and organize knowledge sharing activities
Student	Knowledge receiver and creator	Participate in knowledge discussion and innovation, and spread knowledge
Industry Experts	Practical knowledge supplementer	Provide industry experience and cutting-edge trends

### 3.2. Object Elements

Design education knowledge can be categorized into three primary types: theoretical knowledge, practical knowledge, and innovative knowledge. Theoretical knowledge is characterized by its systematic and abstract nature, requiring a deep understanding and the ability to transform concepts into applicable frameworks. Practical knowledge, on the other hand, emphasizes hands-on operation and real-world application, necessitating a robust platform for implementation and practice [9]. Innovative knowledge stands out due to its focus on originality and foresight, demanding an environment that fosters creativity and forward-thinking. Each type of knowledge presents unique challenges and priorities in the sharing process. For instance, theoretical knowledge sharing requires clarity and adaptability, practical knowledge sharing depends on experiential platforms, and innovative knowledge sharing thrives in environments that encourage ideation and experimentation. The interplay between knowledge sharing and innovation is mutually reinforcing, as sharing provides the foundation and inspiration for innovation, while innovation continuously enriches the pool of shared knowledge.

### 3.3. Environmental Factors

The institutional environment plays a crucial role in regulating and safeguarding the process of knowledge sharing. By implementing reasonable incentive systems and robust intellectual property protection mechanisms, organizations can effectively stimulate the enthusiasm and willingness of their members to share knowledge. Additionally, the cultural environment significantly influences knowledge sharing. An open and inclusive cultural atmosphere fosters collaboration and innovation, creating a fertile ground for the exchange of ideas. The diverse values and thought processes of individuals from different cultural backgrounds can either enhance or hinder the effectiveness of knowledge sharing, depending on how well these differences are managed. Furthermore, the technological environment provides indispensable support for knowledge sharing. Advanced technologies, such as the Internet and virtual reality, transcend the traditional limitations of time and space, thereby enhancing both the efficiency and the scope of knowledge dissemination. These factors collectively shape the dynamics of knowledge sharing within organizations and communities (As shown in Table 2).

**Table 2.** Impact of environmental factors on knowledge sharing

<b>Environmental factors</b>	<b>Impact on knowledge sharing</b>
Institutional environment	Standardize sharing behavior, provide guarantees, and influence member enthusiasm
Cultural environment	Create a sharing atmosphere and influence members' willingness and methods of communication
Technical environment	Expand sharing channels and improve sharing efficiency and scope

## 4. Practical Paths for Community Knowledge Sharing in Global Higher Design Education

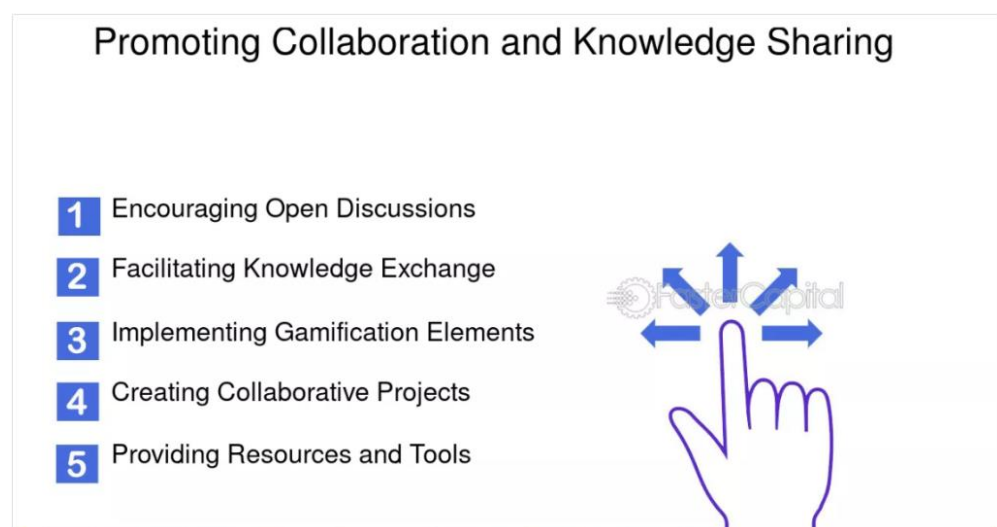
### 4.1. Mechanism Construction

Mechanism construction serves as the institutional foundation for fostering knowledge sharing within the global higher design education community. Its primary focus is on regulating member behaviors, encouraging active participation, and harmonizing the interests of various stakeholders through the establishment of systematic rules. To begin with, material incentives play a pivotal role in motivating engagement. Dedicated funds can be allocated to reward educators, students, and institutions that contribute significantly to knowledge sharing initiatives. For instance, financial support can be provided to entities that develop high-quality shared courses or facilitate cross-institutional collaborative projects. Additionally, spiritual incentives are equally

important; integrating the outcomes of knowledge sharing into teacher evaluations and student performance assessments can enhance members' sense of accomplishment and recognition. Furthermore, trust mechanisms are essential for ensuring the sustainability of knowledge sharing. Establishing a member credit system to document participation and contributions can foster transparency and build mutual trust within the community. A robust credit evaluation framework can further reinforce this trust. Lastly, the coordination mechanism is critical for resolving disputes and ensuring equitable resource distribution. A coordination committee, comprising representatives from all member entities, can be formed to develop standardized processes for addressing copyright conflicts and resource allocation disparities. This committee would play a key role in maintaining the orderly progression of sharing activities, ensuring fairness, and promoting collaboration across the community.

#### 4.2. Platform Construction

Platform construction provides essential physical spaces and technical frameworks for effective knowledge sharing. The integration of physical and digital resources is crucial to establishing a multi-level and comprehensive sharing network. Physical platforms, such as international design education seminars, workshops, and other collaborative activities, serve as vital channels for fostering in-depth exchanges. These activities can be tailored to address specific topics and invite participation from leading scholars, designers, and education managers from around the globe. They can include keynote speeches, roundtable discussions, hands-on exercises, and the transfer of practical experiences. On the digital front, leveraging advanced technologies such as cloud computing and big data is imperative to develop a robust and fully functional online sharing system. This system should feature modules like a course resource library, a design case repository, and a communication community, enabling users to upload, download, comment, and engage in secondary creation. Additionally, intelligent recommendation algorithms can be employed to analyze users' learning preferences and research interests, ensuring the delivery of tailored knowledge content to enhance sharing efficiency [10]. The synergy between physical and digital platforms is particularly significant. Physical activities can generate digital resources, such as videos and reports, to enrich online platform content. Conversely, digital platforms can facilitate the organization of physical events by publishing notices, gathering participant feedback, and providing data-driven insights. This creates a seamless integration of online and offline resources, forming a cohesive knowledge-sharing ecosystem. Figure 1 illustrates the dynamics of collaboration and knowledge sharing.



**Figure 1.** Promoting collaboration and knowledge sharing

### 4.3. Cultural Cultivation

Cultural cultivation is dedicated to fostering a shared value system and behavioral norms among community members, thereby creating a sustainable and supportive environment for knowledge sharing. At its core, a sharing culture emphasizes openness, inclusivity, collaboration, and mutual benefit, transforming knowledge sharing from a passive obligation into an active and voluntary pursuit. To effectively cultivate such a culture, it is essential to prioritize awareness and guidance by promoting successful examples and highlighting the significance of knowledge sharing through official media channels and internal community publications. This approach helps establish role models and motivates members to emulate their practices. Furthermore, integrating sharing culture into educational frameworks and extracurricular activities can significantly enhance its impact. For instance, specialized courses such as "Design Knowledge Sharing and Innovation" can be introduced, alongside initiatives like cross-institutional graduation projects, creative competitions, and collaborative events. These activities allow participants to experience firsthand the innovative potential of shared knowledge. Additionally, leveraging the influence of exemplary individuals is crucial. Experts and scholars with notable achievements in knowledge sharing can serve as cultural ambassadors, sharing their experiences through lectures, interviews, and other interactive formats to inspire broader participation. Another critical aspect of cultural cultivation is fostering cross-cultural integration. By respecting the diverse educational traditions and design practices of various countries and regions, members can learn from one another and complement each other's strengths. This approach nurtures a multicultural environment that encourages coexistence and provides a wealth of inspiration for knowledge-driven innovation.

Mechanism construction, platform development, and cultural cultivation are interdependent and collectively form a comprehensive framework for effective knowledge sharing. Mechanism construction establishes the institutional foundation necessary for the operation of platforms and the promotion of cultural values. Platforms, in turn, serve as the medium through which mechanisms are implemented and cultural ideals are disseminated [1]. Cultural cultivation plays a pivotal role by stimulating the intrinsic motivation of community members to actively engage in knowledge sharing. The synergy among these three elements is essential for fostering a dynamic and efficient knowledge-sharing ecosystem within the context of global higher design education. By aligning institutional structures, technological platforms, and cultural initiatives, the community can achieve a harmonious balance that supports sustainable growth and innovation in knowledge exchange.

## 5. Case Analysis of Community Knowledge Sharing Theory in Global Higher Design Education

### 5.1. Case of an Internationally Renowned Design Education Community: Cumulus

Founded in 1990, Cumulus is recognized as the world's largest and most influential international organization dedicated to higher education in art and design [11]. With a membership exceeding 500 institutions spanning over 70 countries and regions, Cumulus is committed to fostering global exchange, collaboration, and advancement in art and design education. The organization has implemented numerous innovative practices to facilitate knowledge sharing and enhance the collective expertise of its members.

In the realm of academic exchanges and collaboration, the Cumulus Alliance organizes an annual international conference to address emerging and critical issues in design education. For instance, the 2023 conference, themed "Design and Sustainable Future," attracted over a thousand participants, including experts, scholars, designers, and educators from diverse regions worldwide. Through keynote speeches, roundtable discussions, workshops, and other interactive formats, attendees shared cutting-edge research findings and practical experiences. This platform significantly contributed to the

dissemination and integration of sustainable design principles within global design education, fostering a broader understanding and application of these concepts.

Regarding resource sharing and platform development, the Cumulus Alliance has established an online resource-sharing platform that consolidates a wide array of educational materials, including course content, design case studies, academic papers, and other valuable resources. This platform enables member institutions to upload, access, and share resources efficiently. It incorporates features such as categorized search options and intelligent recommendation systems, allowing users to quickly locate the knowledge they need. Additionally, the platform includes an online communication community where educators and students can engage in discussions, exchange ideas on design-related topics, and stimulate creative thinking and innovation [12].

The knowledge-sharing initiatives of Cumulus have yielded significant achievements. Over the years, the influence of its member institutions within the international design community has steadily grown. Students from these institutions have increasingly garnered recognition by winning prestigious awards in global design competitions, while faculty members have produced a wealth of impactful academic research. The success of Cumulus can be attributed to its well-structured organizational framework and operational mechanisms, which effectively coordinate relationships among member institutions and ensure the seamless execution of knowledge-sharing activities. These efforts have collectively strengthened the global presence and reputation of its members in the field of design education.

#### *5.2. Typical Domestic Design Education Community Case: Art Administration Education Alliance-Yangtze River Delta*

The Art Administration Education Alliance-Yangtze River Delta was established through the collaboration of universities and design institutions located in Shanghai, Jiangsu, Zhejiang, Anhui, and an additional city. Its primary objective is to consolidate high-quality design education resources within the Yangtze River Delta region, fostering the coordinated advancement of regional design education. Leveraging the region's robust economic foundation, abundant cultural assets, and thriving design industry, the alliance has developed a distinctive framework for knowledge sharing and resource integration. This initiative reflects the strategic importance of regional cooperation in enhancing educational outcomes and addressing the evolving demands of the design sector.

The alliance actively facilitates industry-university-research collaboration by encouraging deeper partnerships between academic institutions, enterprises, and industry associations. For instance, it organizes design projects in collaboration with prominent companies within the Yangtze River Delta, enabling students to engage in real-world design tasks and apply theoretical knowledge to practical scenarios. Furthermore, corporate designers and industry professionals are invited to deliver lectures and provide mentorship within university settings, ensuring a seamless integration of theoretical and practical learning methodologies. In terms of course resource sharing, the alliance coordinates member institutions to jointly develop comprehensive, high-quality courses that are distributed via online platforms. These courses encompass diverse fields such as industrial design, environmental art design, and visual communication design, offering rich content and varied instructional formats. Additionally, the alliance hosts regular teaching seminars and professional development workshops aimed at fostering the exchange of pedagogical insights and enhancing the expertise of educators [2, 4]. By prioritizing collaborative efforts and resource optimization, the alliance contributes significantly to the cultivation of skilled professionals equipped to meet the dynamic challenges of the design industry.

## 6. Conclusion

Through a systematic study of the knowledge sharing theory within the community construction of global higher design education, this research has elucidated the intricate connotations and interrelationships between the community and knowledge sharing theory. It has thoroughly examined the critical components encompassing the subject, object, and environment of knowledge sharing, while exploring practical approaches such as mechanism development, platform establishment, and cultural cultivation. Furthermore, the study has synthesized insights and identified limitations based on a comparative analysis of international and domestic cases. The findings underscore that a robust knowledge sharing theory system serves as a pivotal driving force for advancing the construction and evolution of the global higher design education community. Moving forward, it is imperative to deepen investigations into the theoretical frameworks of knowledge sharing, aligning them with contemporary developmental demands. Efforts should focus on refining mechanisms, enhancing platforms, and fostering a culture conducive to effective community knowledge sharing. Such advancements are essential for facilitating the seamless integration and collaborative innovation of global design education resources. Ultimately, these endeavors aim to establish a solid foundation for nurturing high-caliber design professionals equipped with international perspectives, innovative capabilities, and cross-cultural communication skills, thereby propelling global higher design education into a transformative new phase of development.

## References

1. E. Ali and S. George, "Sustaining Knowledge Sharing Practices in Private Higher Education Institutions in the Kingdom of Bahrain," in *Business Development via AI and Digitalization: Volume 1*, Cham: Springer Nature Switzerland, 2024, pp. 535-549.
2. U. Ahsanah, W. Lady Oktafia, A. K. Dewi, and Y. Artanti, "The Study of Online knowledge Sharing Behavior: Effect of Individual Motivation factors on Individual Performance in Higher Education Students," *International Journal of Advances in Scientific Research and Engineering*, vol. 6, no. 02, pp. 134-140, 2020.
3. J. Kularajasingam, A. Subramaniam, D. K. Sarjit Singh, and M. Sambasivan, "The impact of knowledge sharing behaviour and social intelligence of university academics on their performance: The mediating role of competencies," *Journal of Education for Business*, vol. 97, no. 1, pp. 54-61, 2022.
4. M. A. Fauzi, F. Mohamad, and N. Abdul Wahab, "Knowledge sharing via social media in higher education: a bibliometric analysis," *Journal of Applied Research in Higher Education*, vol. 16, no. 5, pp. 1420-1437, 2024.
5. R. B. Alves and P. Pinheiro, "Factors influencing tacit knowledge sharing in research groups in higher education institutions," *Administrative Sciences*, vol. 12, no. 3, p. 89, 2022.
6. Y. Luo, "Micro-processes of knowledge sharing in higher education: international students as a source," *Studies in Higher Education*, vol. 49, no. 6, pp. 913-928, 2024.
7. J. Hu, J. Lee, and X. Yi, "Blended knowledge sharing model in design professional," *Scientific Reports*, vol. 13, no. 1, p. 16326, 2023.
8. S. H. Chiu, "Students' knowledge sources and knowledge sharing in the design studio—an exploratory study," *International Journal of Technology and Design Education*, vol. 20, no. 1, pp. 27-42, 2010.
9. O. Al-Kurdi, R. El-Haddadeh, and T. Eldabi, "Knowledge sharing in higher education institutions: a systematic review," *Journal of Enterprise Information Management*, vol. 31, no. 2, pp. 226-246, 2018.
10. Y. Charband and N. Jafari Navimipour, "Knowledge sharing mechanisms in the education: A systematic review of the state of the art literature and recommendations for future research," *Kybernetes*, vol. 47, no. 7, pp. 1456-1490, 2018.
11. X. Huang, H. Li, L. Huang, and T. Jiang, "Research on the development and innovation of online education based on digital knowledge sharing community," *BMC Psychology*, vol. 11, no. 1, p. 295, 2023.
12. T. J. van Weert, "Education of the twenty-first century: New professionalism in lifelong learning, knowledge development and knowledge sharing," *Education and Information Technologies*, vol. 11, no. 3, pp. 217-237, 2006.

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of Publisher and/or the editor(s). Publisher and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.