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Cultural Integration Project-Based Learning (CIPBL): A Teaching Approach for Cultural and Artistic Vocational Education in China

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Abstract

The research investigates China's vocational cultural and artistic education difficulties by focusing on students' inadequate cultural understanding and their limited cultural integration skills and curriculum-industry mismatch. The main goal is to develop Cultural Integration Project-Based Learning (CIPBL) as an improved teaching method that combines Project-Based Learning (PBL) with enhanced cultural and market-driven curriculum to address these gaps. Through qualitative research the study performs ethnographic interviews with educators and students and industry professionals to understand both the advantages and weaknesses of existing PBL practices in cultural and artistic education. The research shows existing PBL supports creativity and teamwork but it does not achieve sufficient cultural integration and industry standards. The CIPBL framework emerges from Constructivism and Social Learning Theory and Cultural Capital Theory to enhance cultural literacy and vocational skills simultaneously. The research presents a complete three-dimensional evaluation framework to measure cultural integration and market adaptability within student projects. The CIPBL system will improve vocational education by connecting it better to industrial requirements to prepare students for success in the fast-changing cultural and creative industries.

Keywords: Project-Based Learning (PBL), Cultural Integration, Vocational Education, Teaching Approach

Introduction

A nation's historical and cultural heritage is a fundamental source of its identity, social cohesion, and spiritual vitality. Preserving and transmitting cultural traditions across generations is not only a way to honor the past, but also a strategy for shaping the future through shared values and aesthetic practices. As emphasized by Bourdieu (1990), cultural capital plays a crucial role in the formation of collective identities and the reproduction of societal norms. In the context of modern education, cultivating cultural literacy is essential for strengthening national cultural confidence and fostering innovation rooted in heritage (Thomson & Hall, 2022).

In this regard, the cultural and creative industries (CCI) play a dual role. Not only do they act as custodians of intangible heritage, but they also transform traditional culture into new forms of economic productivity through design, media, fashion, and digital art. Research shows that cultural and creative industries are key drivers of economic growth, employment, and urban revitalization, especially in countries with rich cultural resources (Bille, 2024). The integration of traditional culture with modern design methods and technological tools makes the CCI a strategic sector for national development and international cultural influence (Platonova et al., 2022).

China's cultural and creative industries have entered a period of rapid expansion, fueled by policy support, digital innovation, and a growing domestic market. As the industry shifts toward high-value, culturally rooted production, the demand for interdisciplinary, culturally literate, and market-savvy vocational talent has surged dramatically (Wang, 2024). However, there remains a mismatch between industry needs and current educational models, particularly in the vocational sector (Chen & Che Din, 2025). This makes it imperative to develop teaching strategies that not only provide technical skills, but also nurture cultural competence and innovation.

The Ministry of Education of China issued the "Guiding Opinions on Promoting the High-Quality Development of Cultural and Artistic Vocational Education in the New Era" in 2022. The notice calls for accelerating the establishment of a modern cultural and artistic vocational education system to meet the rapid development of cultural undertakings and cultural and creative Industries（CCI）needs (Ministry of Education of China, 2022).

However, Recent studies have shown that cultural and artistic vocational education in China still have some problems, such as curriculum design disconnected with industry demands, lack of application of innovative teaching method, insufficient integration of practical training with emerging technology skills and over reliance on skill assessment in the curriculum evaluation. Lead to the ability of students to develop their cultural literacy, the ability to integrate other disciplines, to think creatively, and to adapt to the market has been neglected. (Yin, 2024; Chen & Che Din, 2025; Zhen, Jiang, & Wang, 2023; Guo, 2024; Xu, Ting, & Lu, 2023; Liu, 2023)

Besides, the rapid development of vocational education and lack of key supporting policies has caused the phenomenon of 'large scale, low quality', with the allocation of key resources still falling short of the standards seen in traditional technical vocational education. (Song & Xu, 2024; Chen, Schmidtke, & Jin, 2024)

Therefore, this study focuses on an in-depth study of the features of curriculum for cultural and artistic vocational education and develop a more applicable teaching approach.

Literature Review

Features and Theoretical Foundations of Curriculum for Cultural and Artistic Vocational Education

Researchers generally agree that the core features of vocational cultural and artistic education are interdisciplinary integration, culture-driven, and market orientation. (Tryhub,2024; Wang,2024; Pan, 2023; Xue, Chularut, & Kambhu Na Ayudhaya, 2024; Du,

2023; Pan, 2017) To align with these features, the teaching approach for vocational cultural and artistic education base on Constructivist Learning Theory and implement the Zone of Proximal Development principles (ZPD) (Vygotsky, 1978). Enable students to build knowledge actively within real situations through appropriate guidance and technological tools which help students reconstruct knowledge structures to achieve deep learning of complex systems. (Tong, 2024; Tan, 2021; Platonova et al., 2022)

Furthermore, from the perspective of cultural capital externalities theory (Bille, 2024), vocational cultural and artistic education not only influence individual knowledge growth but also transmit cultural values through social interactions, shaping group identity. This reflects the culture-driven feature of the curriculum, where cultural and creative education involves not only skill training but also emphasizes the accumulation of cultural capital and the shaping of cultural identity. (Bourdieu, 1990; Bourdieu & Passeron, 1990; Thomson & Hall, 2022).

Therefore, it is also necessary to integrate Social Learning Theory (Bruner, 1966), employing strategies of observation and imitation to design more flexible teaching methods. This approach will enable students not only to master the latest industry knowledge but also to develop the ability to predict future trends and adjust their cognitive structures accordingly. (Wang, 2024; Lin, 2023; Daud, 2024; Tong, 2024)

Project-Based Learning (PBL) for Vocational Cultural and Artistic Curriculum

PBL combines Constructivist with Experiential Learning and Sociocultural Theories（Thomas, 2000; Krajcik& Shin, 2014). Previous research has showed that PBL generates effective outcomes in vocational cultural and artistic education which boost student creativity and attains better integration across fields and market adaptability. On the other hand, these studies also expose several restrictions that emerge in implementing PBL for vocational cultural and artistic education. Such as insufficient innovative transformations of local cultural elements, insufficient systematic development of creative thinking and cross-cultural expression, unclear teacher guidance roles and inadequate resources and support. (Ning & Fu, 2024; Lyu, 2024; Howe, 2020; Moumoutzis et al., 2017; Guo & Pilz 2020; Ying, 2022) Furthermore, according to other several studies, PBL research primarily focuses on technical fields but shows limited attention toward cultural and artistic fields, lead to relevant educator do not have enough references for design and implementation. (Ken Wang, 2024; Ahmad et al., 2023; Shi & Li, 2024; Chen et al., 2020)

The Current Study

Based on the review gaps and issues identified above, this study aims to propose a Cultural Integration Project-Based Learning (CIPBL) to optimize the application of PBL in cultural and Arts vocational education. Therefore, this study seeks to achieve these objectives:

(1) CIPBL teaching approach for vocational cultural and artistic education in China.
(2) Identifying the core steps of CIPBL.

To achieve the above objectives, this study will focus on the following research questions:

(1) How can the CIPBL framework be structured within the PBL model to better suit cultural and creative vocational education?
(2) What are the key components that should be included in the core instructional steps of CIPBL?

Methodology

Study Design

The research adopts a qualitative design which stems from the constructivist research paradigm, this approach enables diverse participant distribution because it focuses on individual perspectives as the core research element (Cobern,1993) ,meanwhile it is also important to consider cultural attributes, thus, this study draws upon ethnographic interview theory (Spradley, 1979) to construct a semi-structured interviews combined with document analysis to explore in-depth the understanding and practices of teachers, students, and industry experts regarding the application of PBL in vocational cultural and artistic education. Additionally, it references digital ethnography (Pink et al., 2015) to align with the digital development trends in the cultural and creative industries. Table 1 shows the framework of this approach.

Table 1
Interviews Approaches Framework

Step	Teachers	Students	Industry Experts
Select a cultural phenomenon	Investigate cultural integration into PBL teaching. motivations, challenges.	Explore students' understanding and challenges with cultural contents in projects.	Examining how the CCI perceives cultural education.
Build rapport	Ask teachers about their success with cultural elements in PBL and related outcomes.	Learn about students' successful projects and how they use cultural elements.	Listen to industry experts about their needs for cultural education and expectations in the workforce.
Ask descriptive questions	Ask teachers about cultural contents selection, teaching challenges.	Ask students about their views on cultural integration in PBL.	Ask experts about cultural literacy's role in the market.
Conduct domain analysis	identify and apply cultural elements in PBL lessons.	Analyze how students incorporate culture into their projects.	Investigate how culture is integrated into industry products and services.
Use structural questions	Explore how teachers balance cultural content with learning objectives.	Examine students' application of cultural knowledge in their projects.	Assess how industry evaluates cultural innovation in projects.
Develop focused observations	Observe how teachers manage cultural discussions and sensitivity in projects.	Observe how students creatively express cultural themes in projects.	Observe how CCI engage with and influence educational practices.
Synthesize and interpret findings	Summarize teachers' strategies and challenges in cultural integration.	Summarize students' learning gaps and cultural applications.	Analyze industry expectations for cultural literacy and give recommendations.

Participant Selection in Overall Survey

The study participants were teachers, students from four different regional vocational colleges and university, and experts from different types of CCI, to give due consideration to cultural and skills differences. Detailed characteristics of participants are shown in Tables 2, 3, and 4.

Table 2
Interviews Approaches Framework

Study ID(Teachers)	Province (China)	Disciplinary Field	Teaching Experience	PBL Experience
T1	Sichuan	Digital Media Art and Design	13 Years	Yes
T2	Sichuan	Cultural Creative and Design	22 Years	Yes
T3	Sichuan	Modern Textile Technology	15 Years	Yes
T4	Hunan	Product Art Design	27 Years	Yes
T5	Hunan	Environmental Art Design	10 Years	Yes
T6	Shandong	Digital Media Technology	10 Years	Yes
T7	Shandong	Craft Art Design	15 Years	Yes
T8	Guangdong	Environmental Art Design	24 Years	Yes
T9	Guangdong	Game and Animation Design	10 Years	Yes
T10	Guangdong	Visual Communication Design	13 Years	Yes

Table 3
Interviews Approaches Framework

Study ID(Students)	Province (China)	Disciplinary Field	Grade	Team Roles
S1	Sichuan	Digital Media Art and Design	2	Leader
S2	Sichuan	Cultural Creative and Design	2	Leader
S3	Sichuan	Modern Textile Technology	2	Leader
S4	Sichuan	Cultural Creative and Design	2	Core Member
S5	Hunan	Product Art Design	2	Leader
S6	Hunan	Product Art Design	2	Leader
S7	Hunan	Environmental Art Design	2	Leader
S8	Hunan	Environmental Art Design	2	Leader
S9	Shandong	Digital Media Technology	2	Leader
S10	Shandong	Digital Media Technology	2	Leader
S11	Shandong	Craft Art Design	2	Core Member
S12	Shandong	Craft Art Design	2	Core Member
S13	Guangdong	Environmental Art Design	2	Leader
S14	Guangdong	Game and Animation Design	2	Leader
S15	Guangdong	Visual Communication Design	2	Leader
S16	Guangdong	Environmental Art Design	2	Leader

Table 4
Interviews Approaches Framework

Study ID (experts)	Province (China)	Types of industry	Position	Project Experience	Collaboration with Schools
P1	Sichuan	Game production	manager	21	Yes
P2	Sichuan	Cultural products	manager	35	Yes
P3	Hunan	Cultural products	manager	26	No
P4	Shandong	Cultural and Media	producer	20	Yes
P5	Shandong	Product Art Design	producer	20	Yes
P6	Guangdong	Cultural and Media	producer	27	Yes
P7	Guangdong	Film Distribution	manager	35	Yes
P8	Guangdong	Game production	producer	20	Yes

Participant Selection in Overall Survey
The interviews will be conducted both online and offline, with a time frame from April to December 2024. Each interview will last between 45 to 60 minutes. All interviews will be recorded and automatically transcribed in Chinese-Mandarin by AmberScript.

Additionally, documents provided by the participants, which may include various formats (such as text, images, videos, and project files), will be collected via cloud storage. These documents will then be analyzed by two experts in the field.

The data translation follows a strict procedure, bilingual professionals who understand the cultural background perform the first translation step while two field experts will undertake reciprocal proofreading. A Chinese professional retranslates the English version before comparing it with the original text to maintain content accuracy and consistency.

The final interview data and document analysis results will be systematically organized, coded, and analyzed using NVivo. Subsequently, in alignment with the research objectives, four core themes were ultimately defined in Table 5

Table 5
Coding Scheme

Code Theme (PBL Stage)	Core Theme	Description
T1 Problem Identification and Project Design	Selection of Cultural Themes & Project Design	Discusses how to select suitable cultural themes and integrate them into the project design.
T2 Knowledge Construction and Application	Cultural Integration and Skill Training: Challenges and Strategies	Explores how cultural content can be innovatively applied through technology. And how to balance the cultural Integration and skill Training
T3 Evaluation	Evaluation Mechanisms and Industry Demands	Investigates the core skill requirements in the cultural creative industry and explores multi-dimensional evaluation mechanisms.
T4 Suggestions	Further Suggestions for CIPBL	Participants' additional suggestions.

Findings

Cultural Themes and Project Design

Teachers from different regions follow different approaches in determining whether to define the cultural theme or the project first. In Shandong, Sichuan, and Hunan, teachers tend to prioritize identifying the cultural theme for the PBL teaching, and then design the project based on theme. In contrast, teachers in Guangdong are more focused on the market transformation of cultural content, often determining the PBL project based on market demands first and then integrating relevant cultural themes.

This difference in focus leads to distinct strategies in the initial stages of PBL. Teachers in Shandong, Sichuan, and Hunan prioritize the use of cultural resources, guiding students through field experiences to explore the origins, cultural significance, and traditional craftsmanship:

“Taking students to climb Mount Tai… to experience the mindset of ancient people” (T6, T7)

“Taking students to visit the Sanxingdui Museum and interact with the archaeological team to understand cultural background and the latest discoveries” (T1-T3)

“Visiting intangible cultural heritage artisans and experiencing the traditional craft process” (T2-T5)

Teachers in Guangdong tend to guide students through methods such as brand planning, market analysis, and user research, making the PBL projects more commercially practical. industry experts all agree that the commercialization of cultural creativity is a key direction for vocational education:

“Audience analysis can guide students in identifying product attributes, and sales data can help students define product positioning” (T8-10)

“You can’t just create a cultural symbol; you have to consider its market positioning, target audience, and commercial feasibility” (P1-8)

Document analysis further corroborates these regional differences. In a teaching design from a vocational college in Sichuan, the PBL task is “to design the emblem, torch, and

medals for the 20th World University Games based on local intangible cultural heritage," where students are required to research local cultural symbols and create digital presentation content. and a teaching plan from a vocational college in Guangdong clearly instructs students to "complete a cultural creative product brand plan targeting young consumer," reflecting the market-oriented cultural innovation mindset.

These regional differences indicate that PBL courses in different areas emphasize varying strategies for cultural integration.

Cultural Integration and Skill Training: Challenges and Strategies

The study indicates that fields such as virtual content development, game animation production, and film production—Virtual content development disciplines—can more easily achieve innovative expressions of cultural content through digital technologies. During project implementation, students have more time to deeply study and understand cultural content, and the resources needed are relatively easy to access:

" CGI (Computer-generated imagery) technology, we (students) are able to present traditional cultural elements (ancient architecture, historical scenes, character designs, etc.) in a more vivid and realistic way." (S1, S9, S10, S14, S15)

"Now, many online platforms provide a wealth of cultural resources, including historical documents, traditional art images, videos, audio, they can be directly used in the creation of games and animations." (S9, S14, S15)

However, for disciplines that produce physical products, such as Craft Design, Textiles Design, and Environmental Art, students not only need to learn digital skills and production techniques but also have to learn traditional crafts and cultural knowledge. Students need invest more time and resource in these courses, and they often face limitations in terms of tools, equipment, and workspaces:

"We have Rhino (design application software) for 3D printing, and on the other, we have traditional crafts (cultural heritage woodworking). it is hard to balance both within a short time." (S7, S8)

"We use machines to recognize the properties of different fibers and fabrics, design with software to create 3D model, and also practice on a loom and learn traditional embroidery skills." (S3)

Document analysis further confirmed these findings, as multiple teacher teaching plans indicated that the ratio of theory to practice in the digital product field was 5:5, while in product-making-related disciplines, it was predominantly 3:7.

Therefore, teachers and industry experts all emphasized the importance of timely intervention and guidance on cultural content learning and workflow during the project implementation phase. They also highlighted the positive impact of students' self-efficacy and teamwork at this stage:

" We use more case-based teaching and provide targeted guidance to avoid superficiality or ideas that cannot be realized." (T1-T10)

" The pressure is high, so (students') motivation tends to decline. We need to continuously encourage them to solve problems through teamwork and to find solutions through communication and discussion."(T1-T10)

" Require students to strictly follow the company's workflow, help them break down problems and assign tasks, thus improving the team's collaboration efficiency." (P1-8)

Evaluation Mechanisms and Industry Demands

In the evaluation phase of PBL, for final assessment methods are basically skills evaluation and the criteria typically cover the following aspects: students' ability to integrate culture, technical application, creative expression, and the commercialization potential of the projects. However, significant differences exist in process evaluation, Similar to the project implementation phase, this difference is primarily determined by the differences in disciplines.

In virtual content development disciplines, process evaluation focuses on students' application of technology and creative expression during the project implementation phase. It emphasizes idea realization. Students are required to present reports based on the project workflow, demonstrating how they integrate cultural elements with design software.

For disciplines that produce physical products, emphasis on how students translate cultural elements into products, particular focus on the integration of market needs. Throughout the project, students are required to conduct multiple rounds of research, with teachers evaluating and providing guidance based on the reports. During the evaluation process, students must show how they creatively merge traditional culture with modern design, while utilizing interdisciplinary knowledge (such as materials science and craftsmanship) to enhance the feasibility of the product.

Document analysis reveals that students' project undergo a continuous process of adjustment and refinement. This reflects their try to balance technology, culture, and market demands, ensuring that their design works not only carry cultural significance but also hold practical market value.

These findings suggests that specific characteristics of a discipline have unique educational requirements for process evaluation than the final evaluation criteria.

Further Suggestions for CIPBL

Teachers generally express strong support for the introduction of CIPBL, believing it could provide clearer cultural integration strategies for cultural and creative courses. However, they also raise specific concerns about its implementation, especially how to adjust the evaluation system:

"The evaluation of cultural literacy and creative content is highly subjective, while market testing is costly, time-consuming, and often neglects the evaluation of cultural content. I suggest referring to movie ratings and game development evaluation systems to create a big data tool tailored for cultural and artistic course assessments. This tool could establish and quantify a series of mass acceptance standards, or aesthetic standards."(T9)

Industry experts emphasize the importance of balancing cultural content with practical industry needs, offering key suggestions:

"It is crucial to clearly define the direction of the cultural and artistic project, design requirements, technical standards, and expected outcomes. A risk assessment and management mechanism should be established, involving both enterprises and schools in

evaluating potential project risks (such as delays, technical difficulties, budget overruns, and talent turnover).”(P3,P5,P6)

Discussion

This study generally shows that PBL is highly adaptable and autonomous in China's vocational cultural and artistic education. (Daud, 2024; Lyu Youyou, 2024) but its implementation largely depends on the individual experience of teachers, and there is no standardized implementation structure or evaluation system. (Hussein, 2021; Ahmad et al., 2023) Establishing a standardized PBL implementation framework and a diverse assessment system for vocational cultural and artistic education is a crucial pathway to enhancing students' cultural understanding, creativity, and technical skills. (Ken Wang, 2024; Samaniego et al., 2024; Tryhub et al., 2024; Lin, 2023).

Consistent with other research (Liu et al., 2020; Guo & Pilz, 2020; Syahril et al., 2022) this study shows that the selection of cultural themes and project design in PBL projects is influenced by shaped by the dual demands of local cultural policies and economic structures. Therefore, thorough analysis of local cultural policies and examination of the local economic structure should be performed prior to selecting and designing cultural themes for PBL projects. leveraging methods such as field visits, hands-on experiences, market research, and cultural surveys to ensure achievements distribution of cultural understanding and market cognitive. (Lyu & Ang, 2024)

Meanwhile, team collaboration management and standardized workflows should receive equal attention during project design. Because it has directly impact efficiency and quality of PBL follow-up processes (Hussein, 2021; Nurpratiwi et al., 2022) Lyu & Ang, (2024) point out introduce Task Breakdown Templates or Agile Management strategies may positively effective coordination among project team members, resource allocation.

The flexible design of skills training during project implementation phase substantially improves cultural expression effectiveness particularly when digital technology applications are used. The integration of advanced technologies not only facilitates the transformation and upgrading of traditional teaching methods but also enhances students' ability to integrate cultures and foster creativity (Wang et al., 2024).

However, modern technological tools as they emerge does not always lead to accurate cultural expression. especially in the disconnection between skill training and cultural integration training situation, produces superficial forms of projects that fail to deliver deep cultural meaning (Ning & Fu, 2024; Lü, 2024; Howe, 2020)

As a result, it is essential to provide effective and accurate assessment feedback as well as timely interventions from teachers and industry mentors. (Zhen, Jiang, & Wang, 2023; Vrabie, 2021) Other study (Sun, 2023) also suggest that in vocational education, the three-mentor system (academic mentor, practical mentor, and career mentor) plays a significant role in enhancing students' overall capabilities. By integrating academic knowledge, practical experience, and career guidance, this system helps students receive multidimensional support, enabling them to better adapt to industry demands and improve their cultural integration skills.

Furthermore, students' ability to integrate different cultures is often limited by their personal cognition and cultural background, (Chen & Du, 2021) resulting in superficial cultural expression and the loss of the possibility of cultural integration, especially in cross-cultural and interdisciplinary contexts, as well as a lack of English language and communication skills (Jamaludin et al., 2020; Avsheniuk et al., 2023; Zhang & Wu, 2023), which will exacerbate the problem.

This finding also further reveals that promoting and inheriting local and traditional cultures does not mean rejecting foreign or modern cultures. Rather, it emphasizes the diversity and inclusivity of culture (Gong et al., 2024; Zhuolin et al., 2025). These findings stress the need for PBL (Project-Based Learning) implementation to be supported by a wide range of resources, such as providing cross-culture environment, equipment, financial support, mentorship, and practical opportunities. (Hu, 2024; Pan et al., 2021; Pan, 2017; Platonova et al., 2022)

Establishment of student studios and master studios helps to facilitate the introduction of resources, while interdisciplinary lesson preparation and the development of dual-qualified teachers contribute to narrowing the gap caused by resource shortages in PBL implementation (Daud, 2024).

Finally, the evaluation for PBL should be customized according to the characteristics of each project to ensure that the specific needs of each discipline are fully addressed. This would enable a more comprehensive assessment of students' performance in cultural and creative projects (Chen & Bin Che Din, 2024). While the existing evaluation systems cover a broad range of standards, future course designs should pay more attention to balancing the multiple requirements of skills and culture, creativity and market demands, ensuring both the comprehensiveness and fairness of the evaluation standards. Other studies have shown that the CIPP model (Context, Input, Process, Product) provides a multidimensional evaluation framework, particularly suited for PBL environments, effectively balancing the technological, cultural, creative, and market demands (Sufyan & Nunuk, 2024; Ratnaya et al., 2022).

Conclusion

This study explores the current application of PBL in cultural and creative vocational education in China, based on s findings, proposes the Cultural Integration Project-Based Learning (CIPBL) as an optimization strategy. By integrating cultural resources with market demands, this approach ensures that cultural content occupies a central position within PBL projects. It employs Design Thinking (Kimbell, 2011) and interdisciplinary methods to simultaneously enhance students' cultural literacy and skill levels. Through industry-education integration, it aims to improve students' market adaptability, thereby making the project outcomes more valuable in the industry. Additionally, a three-dimensional evaluation system is proposed to optimize the implementation pathway of PBL in cultural and creative vocational education. The framework of CIPBL includes the following four core contents (Fig 1):

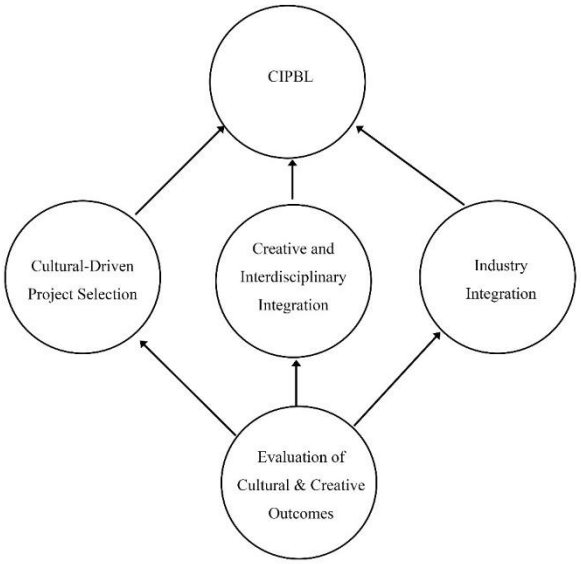

Figure 1. CIPBL Framework

(1) Cultural-Driven Project Selection: Integrating cultural resources with market demands to ensure that cultural content occupies a central position within PBL projects.
(2) Creative & Interdisciplinary Integration: Utilizing Design Thinking and C-STEAM (Qian, Ye, & Lee, 2022) (Science, Technology, Engineering, Arts, and Mathematics) methodologies to enhance students' ability to express cultural creativity, fostering interdisciplinary collaboration and innovation.
(3) Cultural-Driven Project Selection: Integrating cultural resources with market demands to ensure that cultural content occupies a central position within PBL projects.
(4) Creative & Interdisciplinary Integration: Utilizing Design Thinking and C-STEAM (Qian, Ye, & Lee, 2022) (Science, Technology, Engineering, Arts, and Mathematics) methodologies to enhance students' ability to express cultural creativity, fostering interdisciplinary collaboration and innovation.
(5) Industry Integration: Strengthening integration between industry and education, enhancing students' market adaptability and ensuring that project outcomes have practical industry value.
(6) Evaluation of Cultural & Creative Outcomes: Implementing a three-dimensional evaluation system to comprehensively assess cultural understanding, cultural integration, and market adaptability.

Based on this framework, the study proposes a seven-step phases for CIPBL (Fig.2)

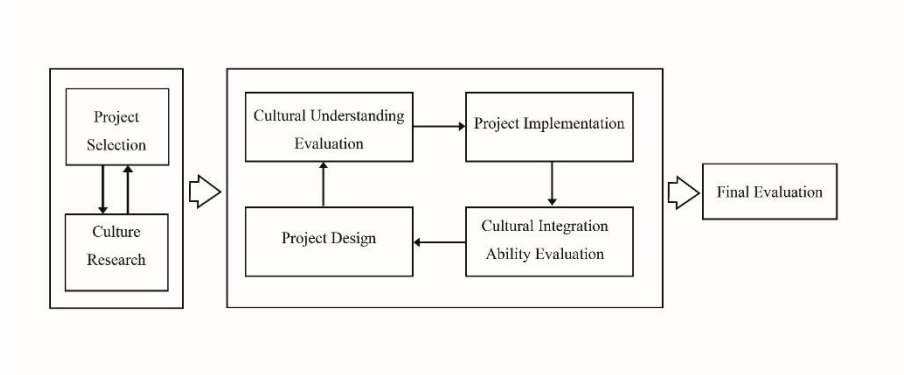

Figure 2. CIPBL Phases

It consists of two internal cycles. The first cycle begins with project selection and extends to the cultural research phase, aimed at understanding the project's commercial attributes and the associated cultural content, ensures that the project possesses both commercial potential and the capacity for cultural integration. Upon completion of the first cycle, the process transitions to the second cycle, which spans from project design to implementation. Within this second cycle, dual assessments of cultural understanding and cultural integration capabilities are conducted to ensures that students' abilities in these areas are enhanced. A final evaluation to determine its overall success.

Given the influence of varying resources and regions this study further proposes suggestions in Table 6 for each phase, providing a reference for applications.

Table 1
CIPBL Process Suggestions

Phase	Suggestions (Premium Strategy)	Suggestions (General Strategy)
1. Project Selection	Choose projects with high culture value, business potential, and possibilities for cross-cultural integration. Prioritize co-development with governments and large enterprises to ensure project resources and support.	Select verified projects or commercial fields that offer basic space for cultural integration, suitable for diverse participants.
2. Culture Research	Conduct in-depth research on the target culture's core values, historical background, and current social situation. support by cultural experts or intangible cultural heritage practitioners, conducting field visits, experiences, and interviews.	Use online information to understand the target culture, combining market research to obtain cultural characteristics and trends.
3. Project Design	Supported by cultural, business experts, and cross-cultural teams, ensuring cultural values, business value, and cultural differences are fully considered. Create a cultural integration plan, team management strategies, and workflows, with multiple rounds of validation and revisions.	Focus on the project's feasibility and basic cultural integration framework, ensuring the project has a clear direction for cultural integration.

4.	Cultural Understanding Evaluation	Use verified cultural competency measurement tools and in-depth interviews to assess participants' depth of understanding of the cultural background.	surveys or online questionnaires to understand student' basic knowledge and awareness of the cultural background.
5.	Project Implementation	Implement a mentor system to follow up on cultural integration progress, with each key stage undergoing cultural fusion effect checks. Adjust the project plan in a timely manner to accommodate cultural differences.	In skill training, conduct regular cultural training and exchanges for team members to ensure effective communication and coordination in adapting to cultural differences.
6.	Cultural Integration Ability Evaluation	Use comprehensive evaluation tools (e.g., cross-cultural adaptability assessment) to evaluate participants' cultural integration abilities. Continuously optimize cultural integration strategies based on feedback data.	Conduct regular evaluations of cultural integration through participant feedback and quantitative data to assess participants' cultural adaptability.
7.	Final Evaluation	At the end of the project, conduct in-depth feedback from all participants (culture, market) and skill assessments. Use professional evaluation tools and third-party independent reviews to verify cultural integration results and project success.	At the end of the project, conduct basic self-assessment and gather participants' feedback. Design assessment content, summarize the project, and evaluate cultural integration effects.

Limitations and Further Study

Limited by the geographic scope subject direction and academic schedule of the college and university. The number of participants was insufficient, and the research design lacked quantitative validation. Meanwhile, most of the documents were provided by the participants themselves, which may introduce biases and affect the objectivity of the findings.

Future research should expand participant selection to include members from diverse geographical regions together with academic fields and cultural industries and relevant institutions. Experimental methods should be processed to evaluate CIPBL effectiveness and determine specific variables that affect cultural literacy and skill development. It is also important to collect data from independent sources to minimize biases.

Acknowledgements and Declarations

Author's contributions

The author was responsible for the study design, data collection, and manuscript preparation

Ethics approval and consent to participate

The participants in this study provided informed consent to participate in the research. The raw interview data and documents contain confidential information and are not publicly available. These data are securely stored by the researcher.

Competing interests

The author declares that there are no competing interests.

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