

Article

Teaching Strategies and Practice of Integrating Regional Elements into UI Design Courses from the Perspective of Curriculum Ideological and Political Education

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Abstract: Aiming at the dilemmas that regional cultural elements remain at the level of symbol appropriation and curriculum ideological and political integration stays at superficial embedding in current UI design courses, this study introduces cultural translation theory, constructs a three-level translation model covering cultural imagery, design grammar and interface expression, and proposes a four-stage progressive teaching framework including cultural immersion, design transformation, interface expression and value reflection. The study designs a corresponding relationship between regional cultural resources and UI knowledge modules, as well as teaching methods including problem chain drive, role immersion and local workshops, and establishes special evaluation dimensions for cultural translation quality. Taking regional cultural resources such as Zhaoqing Duan Inkstone and Song City Wall as materials, two rounds of teaching practice have been carried out in the UI design course for art design majors in application-oriented undergraduate colleges. The results show that the teaching strategy effectively improves students' cultural translation ability and design quality. Students' works have won 11 national and provincial design competition awards, with themes covering three directions including regional cultural communication, social problem solving and traditional cultural innovation. This study provides a transferable practical path for the integration of regional culture into design teaching from the perspective of curriculum ideological and political education, and promotes the exploration of local discourse construction in design education.

Keywords: Curriculum Ideological and Political Education, UI Design, Regional Elements, Cultural Translation, Teaching Strategies

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1. Introduction

Art design professional courses should guide students to base themselves on the times, take root in the people and go deep into life in teaching, establish correct artistic and creative views, consciously inherit and carry forward fine traditional Chinese culture, and enhance cultural confidence (Wang, 2021). This policy orientation points out the direction for the teaching reform of design courses. Design serves people, and its outcomes directly shape users' cognition, emotion and behavior, which naturally carries values and cultural positions. The ideological and political construction of design courses cannot be limited to the teaching of instrumental rationality, but should complete the infiltration of value rationality in professional training, including the construction of cultural identity, the cultivation of social responsibility and the awakening of design ethics (Squires & Preece, 1996). This is the essential feature that distinguishes ideological and political education in design courses from that in other disciplines. From the perspective of learning motivation and user experience, the rationality and cultural affinity of interface design in online learning environments have a significant impact on users' willingness to continue using and learning engagement, which provides theoretical support at the media level for UI design courses to undertake the functions of ideological and political education and cultural education (Ovesleova, 2015).

In recent years, the ideological and political construction of UI design courses has attracted extensive academic attention. At the macro level, a practical framework for ideological and political construction of UI design courses has been constructed from five dimensions including revising teaching syllabi, enriching ideological and political resources, innovating teaching methods,

improving teacher literacy and perfecting evaluation systems (Wang, 2021). At the micro level, the Chinese spirit has been integrated into UI design courses in the form of project-based teaching, and a four-in-one teaching system has been constructed (Liu, 2026). In terms of curriculum reform, teaching innovations such as OBE-based UI design teaching, online-offline hybrid teaching and competition-driven learning have also achieved positive results (Shu & Chen, 2024). In terms of cultural integration, some studies have tried to introduce traditional cultural elements into UI design teaching, and found that 69.87% of students expect to integrate fine traditional Chinese culture into professional classrooms, but there is a significant deviation between teachers' integration methods and students' actual needs (Zheng, 2019).

However, regional cultural resources often enter the classroom in the form of materials in teaching, and cultural elements are separated from their meaning context and reduced to pure visual decoration (Ouyang, 2023). This practice is essentially symbol appropriation rather than cultural transformation, which can neither convey deep cultural connotations nor form real design innovation (Gao, 2025). The integration of curriculum ideological and political education also has the problem of superficial embedding. Ideological and political content enters the classroom in a labeling way, operating separately from professional teaching without interconnection (Chen, 2025). How regional culture realizes the transformation from being visible to being transformed, and how curriculum ideological and political education moves from superficial embedding to deep integration, are core issues that need to be addressed urgently in the current teaching reform of UI design courses.

How can regional cultural resources be transformed into educational resources with both cultural depth and design quality in UI design courses through systematic design of teaching strategies? Different from the superficial idea of taking regional elements as design materials, this study introduces the concept of cultural translation to transform deep structures such as aesthetic paradigms, creation wisdom and spatial logic in regional culture through teaching design. To this end, the study constructs a three-level translation model of cultural imagery, design grammar and interface expression, proposes a four-stage progressive teaching strategy of cultural immersion, design transformation, interface expression and value reflection, and carries out teaching practice with regional resources such as Zhaoqing Duan Inkstone culture and Song City Wall ruins as materials.

2. Theoretical Foundation

2.1. Theoretical Origin and Discrimination of Cultural Translation

As an interdisciplinary concept, the theoretical lineage of cultural translation can be traced back to the cultural turn in translation studies. Ilyas & Shahid (2020) pointed out that translation is not a simple conversion at the linguistic level, but a negotiation and reconstruction between cultural systems, and the subjective intervention of translators makes every translation a cultural recreation. This view provides a theoretical premise for translation to transcend the semantic boundary of linguistic translation and enter a broader field of cultural practice. In the field of science, technology and society studies, Baiocchi et al. (2013) further conceptualized translation based on actor-network theory. Translation is not only the conversion of symbols, but also the reconfiguration of the relationship network between actors, and each translation means the redefinition of interests, identities and meanings. These two theoretical traditions jointly reveal the core mechanism of translation, which is active reconstruction rather than passive transportation.

In the field of design research, Cross (2006) proposed the concept of designerly ways of knowing, emphasizing that the core of design thinking lies in transformation through synthesis, which integrates ambiguous needs, complex situations and various constraints into a coherent design scheme. Hills (2008) pointed out from a semantic perspective that design is essentially a meaning construction activity, and the responsibility of designers is not to add decoration to existing forms, but to create new meanings for artifacts. These classic documents of design education provide internal theoretical support for cultural translation. Translation ability is the meta-ability of designers, and cultural translation is a specific invocation of this meta-ability in cross-cultural situations.

On the basis of the above theories, this study puts forward the definition logic of the concept of cultural translation. Its fundamental difference from existing concepts such as design translation and cultural transcoding is that its core object is not general design needs or information coding, but values, aesthetic paradigms and creation wisdom in specific regional cultures. In other words, cultural translation is a creative transformation process starting from cultural understanding, ending with design expression and centered on meaning regeneration. It requires designers to complete three leaps, from seeing forms to understanding meanings, from understanding meanings to extracting structures, and from extracting structures to creating expressions. These three leaps constitute the epistemological basis of the three-level translation model.

2.2. Culturally Responsive Teaching in Design Education

In international design education research, culturally responsive teaching has become an important academic direction. This theory advocates that teaching should take students' cultural background as a resource rather than an obstacle to be overcome. In the field of visual communication design, culturally responsive design education emphasizes that designers should have cultural

interpretation ability and cross-cultural communication ability, rather than only mastering formal operation skills (Ingalls Vanada, 2014).

Western design education circles have carried out diversified explorations on this. Aalto University in Finland integrates the humanistic view of technology in Nordic design tradition into courses, emphasizing designers' social responsibility for local culture. Parsons School of Design in the United States sets up a cultural mapping module in undergraduate basic courses, requiring students to transform their own cultural background into design language. The Royal College of Art in the United Kingdom guides students to reflect on the role of design in cultural inheritance and power structure through critical design courses. The common orientation of these international practices is to elevate cultural literacy from an accessory of design skills to a core competence dimension of design (Hwang & Wu, 2025).

However, international research on culturally responsive design education shares a common feature. Most of its cultural diversity issues focus on power relations in immigrant culture, racial culture or post-colonial context, while systematic research on the specific proposition of contemporary design transformation of local traditional culture is still relatively weak. This study is a response to this academic gap. It does not simply apply the existing framework of Western culturally responsive teaching, but explores the local path of how traditional cultural resources are absorbed and transformed into professional ability by design education based on the specific situation of Chinese universities. Thus, the problem consciousness of this study forms a dialogue with the international academic circle. If Western culturally responsive teaching focuses on responding to students' cultural background, this study focuses on transforming regional culture into teaching content of design courses. The two complement each other and jointly expand the academic scope of the cultural turn in design education.

2.3. Internal Logic of Integrating Curriculum Ideological and Political Education into UI Design Courses

The ideological and political integration of UI design courses should not adopt explicit preaching methods. Its course attribute is design practice, with project drive, skill training and aesthetic cultivation as the core teaching forms, which is essentially different from the teaching logic of ideological and political theory courses. Embedding ideological and political content into professional classrooms in the form of lectures or preaching can hardly arouse students' value resonance, but may cause psychological rejection, making curriculum ideological and political education fall into the dilemma of rigid integration and superficiality (Gao, 2025).

A more effective path is to take regional culture as the cognitive object rather than moral teaching material. When students understand the historical origin of Duan Inkstone, the ingenuity inheritance of Duan Inkstone artists and the oriental wisdom in Duan Inkstone aesthetics, their cultural cognition is quietly activated. When teaching further requires students to transform these cultural understandings into their own design language, students complete the cognitive progression from cultural understanding to cultural identity and then to cultural confidence (Zheng, 2025). This process does not require teachers to preach ideological and political content additionally, and the ideological and political effect is naturally generated in the inquiry of how to transform culture into design.

Research based on student engagement theory shows that emotional engagement is a prerequisite for students' deep learning (Zheng, 2025). Regional cultural themes are more likely to stimulate students' emotional resonance and learning engagement because of their natural connection with students' local life experience, which provides a psychological basis for the implicit integration of curriculum ideological and political education. Relevant research further confirms that the role division and collaboration mode on online collaboration platforms can effectively improve students' participation and sense of responsibility (Domínguez-Lloria et al., 2021). Meanwhile, research on experiential learning theory shows that when learners complete the cycle of perception, reflection and application in a real cultural field, their recognition of cultural values is often deeper and more lasting (Ruiz et al., 2020).

2.4. Design Transformation Potential of Regional Elements

To implement the three-level translation model and the integration logic of curriculum ideological and political education, this study establishes an operable interface between regional cultural resources and UI design teaching, and divides Zhaoqing regional cultural resources into five types according to design transformation potential (see Table 1). Different types of regional cultural resources correspond to different knowledge modules and competence objectives in UI design, with different translation paths. Students first complete cultural decoding of selected regional cultural resources at the first level to understand the reason behind their forms, then extract corresponding design grammar according to their type characteristics at the second level, and finally complete interface expression in the corresponding UI knowledge module at the third level.

Table 1. Typological Framework of Regional Cultural Resources and UI Design Transformation Potential.

Resource Type	Zhaoqing Regional Resource Examples	Design Attribute	UI Transformation Potential	Corresponding Translation Level
Material Texture	Duan Inkstone stone patterns including fish brain freeze, banana leaf white and blue flower	Tactile and visual texture	Interface background texture, card texture, micro-texture design	First and second levels
Spatial Structure	Defensive spatial sequence of Song City Wall, bucket arches of Mei'an Temple	Spatial order and hierarchical logic	Information hierarchy planning, navigation structure design	Second and third levels
Color System	Pale grey of Duan Inkstone, ochre brown of ancient city bricks, clear blue water of Seven Star Crags	Color language and symbolic system	Interface theme color, auxiliary color specification, color emotional expression	First and second levels
Graphic Semantics	Inkstone carving patterns including cloud dragon and flower-and-bird motifs, architectural decorations	Graphic symbols and narrative language	Icon design, segmentation decoration, graphical information transmission	Second and third levels
Creation Concept	Design philosophy of adapting craftsmanship to materials in Duan Inkstone	Design methodology and ethics	Responsive design thinking, content priority principle	Third level

3. Construction of Teaching Strategies

3.1. Teaching Framework

Based on the three-level translation model and typological framework, this study constructs a four-stage progressive teaching model including cultural immersion, design transformation, interface expression and value reflection (see Table 2). The first stage of cultural immersion focuses on cultivating students' cultural understanding ability, and establishes emotional connection and cognitive foundation between students and regional culture through field investigation and interview research. The second stage of design transformation focuses on the cultivation of design judgment, guiding students to extract available design grammar from cultural objects and complete the conversion from cultural imagery to design language. The third stage of interface expression points to the training of professional execution ability, and completes the interface presentation with cultural characteristics under the constraints of UI design specifications. The fourth stage of value reflection points to the construction of value consciousness, enabling students to clearly elaborate their own cultural positions and design intentions through design descriptions, scheme reports and peer reviews. The four stages progress layer by layer, with the focus of ideological and political education extending from understanding to judgment, to execution and then to consciousness, forming a complete education chain.

Table 2. Four-stage Progressive Teaching.

Stage Number	Stage Name	Core Competence Objective	Specific Implementation Content	Focus of Ideological and Political Education
First Stage	Cultural Immersion	Cultivate cultural understanding ability	Field investigation and interview research to establish emotional connection and cognitive foundation	Cultural understanding
Second Stage	Design Transformation	Develop design judgment	Extract design grammar and complete the conversion from cultural imagery to design language	Value judgment
Third Stage	Interface Expression	Train professional execution ability	Complete interface presentation with cultural characteristics under the constraints of UI design specifications	Professional execution
Fourth Stage	Value Reflection	Construct value consciousness	Design descriptions, scheme reports and peer reviews to elaborate cultural positions and design intentions	Value consciousness

3.2. Teaching Content Strategy

Breaking through the pattern enumeration presentation of cultural materials in traditional teaching, this study systematically reorganizes regional cultural resources with UI design knowledge modules as the framework. Taking Zhaoqing regional culture as an example, the corresponding relationship between UI design knowledge modules, regional cultural resource docking, translation key points and ideological and political footholds is established (see Table 3). This table aims to provide reference for teachers in teaching design, so that the teaching transformation of regional cultural resources can be carried out on a solid basis. Its core logic is that each type of UI design knowledge module can find culturally homologous resources from regional culture. Color design corresponds to the stone color system of Duan Inkstone, grid system corresponds to the modular masonry logic of Song City Wall, icon design corresponds to the graphic language of inkstone carving patterns, and navigation design corresponds to the spatial narrative of Lingnan gardens. Each group of corresponding relations revolves around operable translation key points and anchors clear ideological and political footholds, so that teaching content completes value construction in professional training.

Table 3. Correspondence Between Regional Cultural Resources and UI Design Knowledge Modules.

Knowledge Module	Regional Cultural Resource Docking	Translation Key Points	Ideological and Political Foothold
Color Design	Duan Inkstone stone color system and four-season colors of Seven Star Crag	Extract low-saturation and calm tones, and conduct comparative analysis with bright colors of Material Design	Calmness and restraint in oriental aesthetics
Grid System	Modular masonry logic of Song City Wall	Transform the arrangement rule of city wall bricks into alignment and rhythm of interface grid	Integration of traditional construction wisdom and contemporary design rationality
Icon Design	Flat translation of inkstone carving patterns	Transform cloud dragon patterns into simplified linear icons; transform flower-and-bird patterns into planar icons	Contemporary activation methods of traditional symbols
Navigation Design	Spatial narrative of changing scenery with each step in Lingnan gardens	Design narrative rhythm of interface transition	Consciousness of local interaction aesthetics

3.3. Teaching Methods

Based on the practical education orientation of application-oriented colleges, this study constructs a three-dimensional teaching method system covering cognitive progression, role collaboration and field practice (see Table 4). The problem chain driven method replaces single propositions with step-by-step questions, and sets four progressive questions of aesthetic judgment, transformation judgment, operation judgment and value judgment to match the cognitive requirements of the three-level translation. In the process of answering progressive questions about the aesthetic levels of Duan Inkstone, the transformation of these aesthetics into interface language and the cultural meaning bearing capacity of the transformed interface, students go from surface aesthetics to cultural value expression, and naturally embed ideological and political goals such as cultural confidence and social responsibility into the design decision-making chain.

Table 4. Teaching Method System for Integrating Regional Elements into UI Design from the Perspective of Curriculum Ideological and Political Education.

Teaching Method	Core Implementation Path	Education Orientation	Evidence of Practical Effect
Problem Chain Driven Method	Set four progressive questions covering aesthetic judgment, transformation judgment, operation judgment and value judgment, matching the levels of cultural translation	Deepen cultural cognition and cultivate design ethics and social responsibility awareness	Form three major work theme directions, supporting 11 national and provincial design competition awards
Role Immersion Method	Undertake positions of product manager, UI designer and cultural consultant in groups, and establish a cultural accuracy review mechanism	Strengthen cultural awe and improve project collaboration and professional quality	Produce 26 sets of curriculum ideological and political practice portfolios and 12 physical display boards in total

Teaching Method	Core Implementation Path	Education Orientation	Evidence of Practical Effect
Local Workshop	Conduct field research in Duan Inkstone Cultural Village and Song City Wall, and complete the practical closed loop of cultural sketch, design sketch and interface prototype	Establish local cultural emotional identity and understand traditional craftsman spirit	Accumulate first-hand cultural materials and promote multiple curriculum topics to be deepened into graduation design

The role immersion method restores the real industrial collaboration scenario, and students assume positions such as product manager, UI designer and cultural consultant in project teams. The core responsibility of the cultural consultant position is to review the cultural accuracy of the design scheme to ensure that the use of Duan Inkstone patterns does not violate their original semantics and the application of Song City Wall colors does not deviate from their historical context. This mechanism strengthens students' sense of cultural awe and inheritance responsibility at the learning level, and cultivates rigorous professional quality and collaboration awareness at the professional level.

Local workshops break classroom boundaries, organize students to carry out field research in Duan Inkstone Cultural Village, Song City Wall ruins and other places, and complete the complete practical closed loop from cultural sketch to design sketch and then to interface prototype. Students obtain first-hand perceptual experience in real cultural fields, understand the dedication and ingenuity inheritance of traditional craftsmen, and realize the transformation from material appropriation to cultural empathy. The three methods work together to form a complete education closed loop of thinking guidance, process control and practice implementation.

3.4. Teaching Evaluation

On the basis of conventional UI scoring criteria including function integrity, visual presentation and interaction logic, this study establishes a four-dimensional evaluation system with dedicated cultural translation indicators (see Table 5). Design evaluation cannot be limited to visual effects and must cover the full cultural translation process (Wang et al., 2021). Cultural understanding assesses students' in-depth interpretation of cultural carriers rather than superficial observation. Translation accuracy evaluates traceable logical paths from cultural materials to UI language, which distinguishes genuine transformation from mere symbol copying. Design quality ensures cultural expression does not sacrifice interface professionalism. Value expression requires clear written elaboration of design cultural stance, quantifying ideological and political outcomes. To guarantee evaluation objectivity and repeatability, inter-rater reliability testing was conducted. Two evaluators with design education backgrounds independently scored all 26 final portfolios. The ICC coefficients for cultural understanding, translation accuracy, design quality and value expression reached 0.82, 0.79, 0.88 and 0.80 respectively, all above the 0.75 excellent threshold, verifying the operability of evaluation standards.

Table 5. Special Evaluation Dimensions for Cultural Translation Quality.

Evaluation Level	Scoring Observation Points	Weight Suggestion
Cultural Understanding	Whether the research report can clarify the deep meaning of cultural elements rather than staying on visual appeal	20%
Translation Accuracy	Whether the transformation process from cultural materials to UI language is traceable and logical	30%
Design Quality	Professional completion degree of the final interface under the UI specification framework	30%
Value Expression	Whether the design description can clearly elaborate the cultural position and design intention of the work	20%

4. Teaching Practice Effects

This course has gone through two rounds of progressive teaching reform iterations, covering a total of 106 third-year students majoring in art design, with 46 in the first round and 45 in the second round. All students have completed prerequisite courses such as color composition and layout design, and have basic visual design ability. The first round of teaching completed the initial construction of the cultural translation model, and the second round optimized teaching links and evaluation systems around the three-level translation framework of cultural imagery, design grammar and interface expression, realizing the systematic upgrading of teaching design.

The study adopts a paired sample pre-test and post-test design for quantitative evaluation, and conducts double-blind scoring on students' initial concept schemes and final complete works based on the cultural translation quality evaluation scale covering three dimensions of cultural understanding, translation accuracy and value expression, with inter-rater reliability ICC of 0.83 indicating good reliability. The results show that the average scores of students in the three dimensions increased by 23.6%, 31.2% and 28.4% respectively, and the overall effect size Cohen's d is 0.78, which is a medium to strong intervention effect, confirming that the teaching strategy has a substantial effect on improving students' cultural translation ability. Stratified data show that the teaching strategy has a particularly significant pulling effect on students with weak foundations, and the score increase of this group in the translation accuracy dimension reaches 34.6%, effectively narrowing the ability differentiation within the class and reflecting the universality of the teaching method.

The two rounds of teaching have produced 26 sets of complete curriculum practice portfolios and 12 physical achievement display boards. The themes of the works cover three major directions, including digital communication of regional culture, optimization of public cultural services and innovative transformation of traditional culture. A total of 11 works have won national and provincial design competition awards, and 8 curriculum topics have been extended to undergraduate graduation design, realizing the effective connection between curriculum teaching and talent training. Different from the evaluation orientation of traditional UI design courses centered on visual performance, the works of this course generally have clear social issue orientation, combining professional design ability with value goals such as cultural inheritance and public service, breaking through the single achievement evaluation dimension of competition awards.

Two types of differentiated characteristics appear in the teaching process. At the student group level, students with better foundations maintain advantages in the visual completion of interfaces, but the improvement of cultural translation innovation is limited. Students with weak foundations achieve leapfrog progress in sorting out cultural logic and applying translation methods. At the material type level, regional elements such as color and texture have low translation thresholds, and students can quickly master and apply them. Deep cultural resources such as spatial order and creation concepts require a longer cognitive cycle. After adding special class hours for regional cultural case analysis in the second round of teaching, the score of works in this dimension increased by 18.7%, verifying the effectiveness of teaching iteration.

Two representative student works fully confirm the practical logic of the three-level translation model. As shown in Figure 1, the Guangdong Museum APP takes Lingnan regional culture as the translation object. At the cultural imagery level, it decodes Lingnan architectural modules, Duan Inkstone color aesthetics and connotations of Cantonese cultural relics. At the design grammar level, it extracts architectural grid logic to build interface grids and extracts Lingnan blue-grey color system to construct standardized color specifications. At the interface expression level, it builds a complete interaction system covering personalized navigation and AR cultural relic interaction. The work targets the public service scenario of provincial museums, and provides an implementable scheme for the digital activation of Lingnan cultural heritage, with application value in public cultural services.



Figure 1. Student Course Work. Source: Redesign of Guangdong Museum APP Based on Traditional Culture.

As shown in Figure 2, the Jijian Museum APP focuses on the integration of Lingnan traditional patterns and local cultural and museum resources. At the cultural imagery level, it digs deep into folk narratives of traditional patterns such as Baoxiang patterns. At the design grammar level, it geometrically simplifies patterns, extracts graphic symbols and warm color systems, and simultaneously constructs an IP narrative system. At the interface expression level, it runs cultural symbols through all interface nodes to form a unified visual language. The work focuses on the promotion needs of small and medium-sized local museums, helps niche regional cultural and museum resources break through communication barriers, and reflects the social value of design empowering cultural inclusiveness. The two cases jointly show that the three-level translation framework can guide students to get rid of the misunderstanding of symbol appropriation, realize the deep transformation of regional culture into UI design language, and simultaneously achieve the curriculum ideological and political goals of professional ability improvement and cultural confidence cultivation.



Figure 2. Student Course Work. Source: Redesign of Jijian Museum APP Based on Regional Culture.

5. Teaching Reflection and Optimization

5.1. Key Implementation Challenges

The first challenge is cognitive narrowing at the student level. When some students first encounter the task of integrating regional elements into design, they instinctively understand cultural translation as pasting work, directly pasting Duan Inks tone patterns as decorative borders around the interface and simply filling Lingnan colors as background color blocks. This inertia of symbol appropriation requires teachers to guide students to break through gradually through multiple rounds of case analysis and scheme iteration. The reason is that students have long received design training modes of material collection and formal application, and lack the thinking framework of meaning understanding, structure extraction and grammar transformation (Ingalls Vanada, 2014). From the perspective of cognitive psychology, this reflects the common cognitive friction in the transition from surface learning to deep learning (Shu & Chen, 2024).

The second challenge is the capacity bottleneck at the teacher level. The design transformation of regional culture puts forward interdisciplinary literacy requirements for teachers, requiring knowledge reserves in three aspects including visual analysis ability of art history, cultural interpretation ability of folklore and transformation expression ability of design. Most current design teachers have academic backgrounds in design or fine arts, lack systematic cognition of the deep structure of regional culture, and tend to stay superficial when guiding students in cultural decoding.

The third challenge is the subjectivity dilemma at the evaluation level. The quality of cultural translation involves multiple dimensions such as the accuracy of cultural understanding, the clarity of translation logic and the depth of value expression. Compared with quantifiable indicators such as UI specifications and color matching, the evaluation standards of these dimensions are

more difficult to objectify. Different teachers may have significant differences in judging whether the cultural translation of a work is successful, which affects the credibility of evaluation. Although internationally accepted methods such as user experience questionnaires provide a systematic evaluation framework, they still need further localized adaptation in the specific dimension of cultural translation quality (Ilyas & Shahid, 2020).

5.2. Optimization Paths

First, build a case base of regional culture and UI design teaching. The case base is organized according to the three-level structure of cultural decoding, design grammar and interface expression, and includes excellent student translation cases and industry benchmark cases such as the Palace Museum series Apps and Dunhuang digital products. Each case should be equipped with a translation path analysis diagram to clearly present the transformation process from cultural materials to design language, so as to provide a referable cognitive model for students. The case base is continuously updated in the form of online documents or teaching platforms, and accumulates and iterates with the teaching cycle.

Second, explore an interdisciplinary collaborative teaching mode. In view of the lack of interdisciplinary literacy of teachers, a dual-teacher classroom or special workshop mechanism can be introduced. In the cultural research stage of the course, teachers majoring in cultural relics and folklore or external experts are invited to give special lectures to help students establish a methodological framework for cultural interpretation. In the design transformation stage, design teachers take the lead to guide students to complete the transformation from cultural understanding to design grammar. This segmented collaboration mode of cultural research plus design transformation injects interdisciplinary support into teaching without changing the main structure of the course.

Third, deepen the mode of learning through competition and teaching through exhibition. Teaching through exhibition puts students' design achievements with regional cultural themes under public vision for inspection through curriculum achievement exhibitions, design week exhibitions and online portfolio releases. Social feedback brought by exhibition is not only third-party verification of the quality of students' cultural translation, but also an important basis for teachers to optimize teaching strategies. Meanwhile, excellent works are actively selected to participate in subject competitions themed on cultural inheritance, rural revitalization and public welfare design, so that students can calibrate their cognition of cultural translation quality against competition standards. The dual mechanism of competition and exhibition forms a cycle of external evaluation and internal reflection, promoting the continuous improvement of teaching quality.

5.3. Model Transferability

Taking Zhaoqing regional culture as a typical case, this study verifies the effectiveness of the cultural translation teaching model in the context of Lingnan culture. When the model is migrated to other regions or disciplines, targeted adaptation adjustments need to be made according to specific conditions.

In terms of adaptation of regional cultural types, for ethnic minority inhabited areas such as Yunnan and Guizhou, the symbolic system of cultural resources is richer and closely connected with daily life. The teaching focus should be on helping students distinguish the boundary between religious symbols and daily aesthetic symbols to avoid cultural offense caused by improper use. For areas with intensive intangible cultural heritage resources but low visibility such as traditional crafts and local operas, the teaching strategy should precede the visual transformation link, first transform intangible culture into visual materials through documentaries and physical observation, and then enter the three-level translation process.

In terms of adaptation of design discipline directions, although this model is based on UI design courses, its four-stage logic of cultural immersion, design transformation, interface expression and value reflection is universal. Visual communication design courses can strengthen the weight of graphic language in the links of design grammar and interface expression. Environmental design courses can replace interface expression with spatial narrative expression and translate cultural grammar into spatial composition logic. Product design courses can replace interface expression with product semantic expression and translate cultural creation concepts into product form and function language.

In terms of adaptation of college types, research-oriented colleges can enhance the theoretical depth of cultural decoding and introduce classic frameworks of anthropology and semiotics. Application-oriented undergraduate colleges can directly refer to the implementation plan of this study and focus on practical training of design methods in the transformation link. Higher vocational colleges can appropriately simplify the theoretical requirements of the first stage of cultural immersion according to the learning situation, and strengthen the example imitation and iterative training of the second stage of design transformation. The above adaptation strategies show that the teaching model is not a fixed template, but an open methodological framework. Its core structure can remain stable in different teaching scenarios, while the specific implementation methods need to be flexibly adjusted according to regional cultural characteristics, disciplinary attributes and learning situation characteristics.

6. Conclusions

Taking cultural translation as the core concept, this study explores the teaching strategies and practical paths of integrating regional elements into UI design courses from the perspective of curriculum ideological and political education. The study proposes a three-level translation model of cultural imagery, design grammar and interface expression, elevating the teaching transformation of regional cultural resources from symbol appropriation to structural transformation. It constructs a four-stage progressive teaching model of cultural immersion, design transformation, interface expression and value reflection, so that ideological and political integration has its own focus and deepens layer by layer in each teaching stage. It also designs supporting teaching content reorganization strategies, teaching methods such as problem chain and role immersion, and special evaluation dimensions for cultural translation quality. Two rounds of teaching practice with regional resources such as Zhaoqing Duan Inkstone culture and Song City Wall ruins as materials show that the integration path of curriculum ideological and political education taking regional culture as the cognitive object enables students to naturally complete the cognitive progression from cultural understanding to cultural identity and cultural confidence in the professional inquiry of how to transform culture into design. The cultural translation awareness and social concerns presented in students' works verify the dual effectiveness of this path in professional ability cultivation and value guidance.

The theoretical contribution of this study lies in introducing the concept of cultural translation into the research field of ideological and political education in UI design courses, establishing a systematic transformation model from cultural resources to UI design language, and providing an operable methodological tool for the construction of local discourse in design education. At the practical level, the teaching strategy system formed by the study can be directly used for curriculum reform in similar colleges and universities, with good promotion value. Future research can further explore the application differences of this model in different UI design directions such as mobile terminal interface design and intelligent terminal interaction design, and can also expand the evaluation dimension from within the course to the user test level to more comprehensively verify the actual impact of cultural translation on user experience.

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References

- Baiocchi, G., Graizbord, D., & Rodríguez-Muñoz, M. (2013). Actor-network theory and the ethnographic imagination: An exercise in translation. *Qualitative Sociology*, 36(4), 323–341. <https://doi.org/10.1007/s11133-013-9261-9>
- Chen, Y. (2025). Reconstruction of Teaching Mode of UI Interface Design Course Based on Online Collaboration Platform. *The Guide of Science & Education*, (23), 56–58. <https://doi.org/10.16400/j.cnki.kjdk.2025.23.018>
- Cross, N. (2006). *Designerly ways of knowing*. Springer. <https://doi.org/10.1007/1-84628-301-9>
- Domínguez-Lloria, S., Fernández-Aguayo, S., Marín-Marín, J. A., & Alvariñas-Villaverde, M. (2021). Effectiveness of a collaborative platform for the mastery of competencies in the distance learning modality during COVID-19. *Sustainability*, 13(11), 5854. <https://doi.org/10.3390/su13115854>
- Gao, T. T. (2025). Teaching strategy of integrating intangible cultural heritage into UI design courses from the perspective of civic education. *Shanghai Packaging*, (5), 260–262. <https://doi.org/10.19446/j.cnki.1005-9423.2025.05.083>
- Hills, J. (2008). The semantic turn: A new foundation for design. *Ergonomics*, 51(8), 1290–1291. <https://doi.org/10.1080/00140130701680668>
- Hwang, Y., & Wu, Y. (2025). Graphic design education in the era of text-to-image generation: Transitioning to contents creator. *International Journal of Art & Design Education*, 44(1), 239–253. <https://doi.org/10.1111/jade.12558>

- Ilyas, F., & Shahid, S. H. (2020). Post-colonial approaches to translation studies: An overview. *University of Wah Journal of Social Sciences*, 3(2), 86–103. <https://doi.org/10.56220/uwjss.v3i2.101>
- Ingalls Vanada, D. (2014). Practically creative: The role of design thinking as an improved paradigm for 21st century art education. *Journal of Cultural Research in Art Education*, 31(1). <https://doi.org/10.21606/learnxdesign.2013.071>
- Liu, C. Y. (2026). Research on immersive teaching of AIGC-driven UI design courses: A case study of "Three Sages Su" cultural and creative products. *Journal of Western China*, (6), 107-110. <https://doi.org/10.16721/j.cnki.cn61-1487/c.2026.06.023>
- Ouyang, W. Y. (2023). Teaching reform and practice of ideological and political education in user interface design courses. *Journal of Higher Education*, 9(4), 178-183. <https://doi.org/10.19980/j.CN23-1593/G4.2023.04.044>
- Ovesleova, H. (2015). E-learning platforms and lacking motivation in students. In M. Kurosu (Ed.), *Proceedings of the International Conference on Human-Computer Interaction* (pp. 215–226). Springer. https://doi.org/10.1007/978-3-319-20889-3_21
- Ruiz, J., Serral, E., & Snoeck, M. (2020). Learning UI functional design principles through simulation with feedback. *IEEE Transactions on Learning Technologies*, 13(4), 1–14. <https://doi.org/10.1109/TLT.2020.3028596>
- Shu, X. Y., & Chen, P. (2024). Research on talent training mode of art design majors under the OBE concept. *Shanghai Packaging*, (11), 216–218. <https://link.cnki.net/doi/10.19446/j.cnki.1005-9423.2024.11.072>
- Squires, D., & Preece, J. (1996). Usability and learning: Evaluating the potential of educational software. *Computers & Education*, 27(1), 15–22. [https://doi.org/10.1016/0360-1315\(96\)00010-3](https://doi.org/10.1016/0360-1315(96)00010-3)
- Wang, M. (2021). Exploration and research on curriculum ideological and political education from the perspective of new media: A case study of UI design. *Popular Literature and Art*, (23), 164-165. <https://doi.org/10.20112/j.cnki.issn1007-5828.2021.23.067>
- Wang, S., Liu, Y., & Yu, D. (2021). Research on evaluation system of user experience with online live course platform. *IEEE Access*, 9, 23863–23875. <https://doi.org/10.1109/ACCESS.2021.3054047>
- Zheng, X. (2019). Research on the reform of teaching content and curriculum system of the "UI Design" course. *The Science Education Article Collects* (Mid-month Issue), (29), 96-97. <https://doi.org/10.16871/j.cnki.kjwhb.2019.10.042>
- Zheng, M. Y. (2025). Application of component construction thinking in UI design courses. *Higher Education and Practice*, 2(10). <https://doi.org/10.62381/H251A14>

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