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When VALUE Rubrics Travel: A Case Study of Creativity Assessment in Chinese Private/minban Higher Education

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Article

Keywords: higher education, creativity assessment, VALUE rubrics, cross-context transfer, Chinese private/minban undergraduate institutions, art and design education, situated learning

Posted Date: September 24th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-9240000/v1

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Additional Declarations: No competing interests reported.

Abstract

This study examines how the AAC&U Creative Thinking VALUE rubric operates as a medium of cultural translation within the volatile institutional ecology of Chinese private (minban) higher education. Although VALUE rubrics have gained global uptake as structuring devices for complex learning outcomes, their descriptors reflect assumptions shaped in U.S. liberal-education contexts. Emerging private colleges in China, however, constitute paradoxical environments: they encourage pedagogical innovation yet remain constrained by correctness-oriented cultures, resource precarity, and performance pressures. Art and design classrooms offer a diagnostic lens for this tension because interactive, historically grounded pedagogies foreground multimodal inquiry, interpretive reasoning, and reflective translation—dispositions often marginalized in minban settings. Using a mixed-methods case study of an interactive Art & Design History course at Shanghai Jian Qiao University, the study integrates pre/post rubric-aligned self-assessment data with qualitative evidence from classroom activities and student interviews. Findings reveal a divergence between pedagogical activation and measurement sensitivity: students reported rich situated learning yet recalibrated their self-ratings downward, reflecting descriptor ambiguity and cultural norms of self-presentation. The study advances methodological insight by combining creativity-development analysis with descriptor-level examination of rubric interpretation, and argues that global rubrics must be co-constructed with local pedagogical cultures to meaningfully support creativity in diverse higher education contexts.

Introduction

Creativity in higher education is increasingly understood not as a fixed cognitive trait but as a situated, relational practice shaped by learners, tools, environments, and socio-cultural expectations (Budge, 2012; Page, 2012; Kinsella, 2018). This ecological framing is particularly salient in Chinese private/minban colleges, where institutional volatility—market dependence, resource precarity, and results-oriented cultures—conditions how creativity is valued and enacted (Mok, 2021; Chen et al., 2022; Sun et al., 2025). Within such settings, abstract dispositions such as experimentation or reflective inquiry may be perceived as “non-essential” unless translated into visible, measurable outcomes (Pan et al., 2023; Su et al., 2024). Private colleges thus embody a paradox: they are simultaneously testing grounds for pedagogical innovation and sites where innovation is structurally constrained.

To navigate this paradox, the present study adopts the AAC&U Creative Thinking VALUE rubric as both a conceptual anchor and a structuring device. VALUE rubrics have been widely used to operationalize complex learning outcomes into observable dimensions (Gray et al., 2019; Sobel, 2022; Ouellette, 2022), and their global uptake reflects their adaptability across disciplines and contexts (Yu et al., 2024; Harver et al., 2019). Yet their descriptors—risk-taking, contradiction, synthesis—carry assumptions shaped outside the volatile ecology of Chinese private higher education. When transferred into this context, rubrics do more than measure learning; they reshape how creativity itself is articulated and justified.

Against this backdrop, the study evaluates an experimentation-based interactive teaching intervention in an undergraduate Art & Design History course at Shanghai Jian Qiao University. The course was designed to counteract correctness-oriented norms by embedding structured risk-taking, multimodal inquiry, and reflective translation into classroom practice (Cheng et al., 2022). Students articulated their creative processes using VALUE-aligned language, enabling analysis of both pedagogical activation and rubric interpretation. The research question guiding this study is: *How do students in a Chinese private Art and Design History course experience creative-thinking pedagogy, and how does the VALUE Creative Thinking rubric register those experiences?*

Literature Review in Three Strands

Global Assessment Transfer: The Creative Thinking VALUE Rubric

The AAC&U's VALUE (Valid Assessment of Learning in Undergraduate Education) rubrics have become one of the most widely recognized frameworks for operationalizing complex learning outcomes into observable dimensions in higher education. Developed as a faculty-driven alternative to standardized testing, they emphasize contextual judgment of authentic student work and foreground developmental criteria that can be adapted across diverse institutional settings. Their global uptake—over 850,000 downloads across nearly 3,000 institutions in 160 countries, including a full Japanese translation as the only non-English version—reflects both their practical utility and their philosophical appeal (AAC&U, 2009; 2026). The 2022 renaming of AAC&U from "Association of American Colleges and Universities" to "American Association of Colleges and Universities" further signals the internationalization of higher education assessment cultures, with membership now spanning more than 25 countries. This trajectory illustrates how frameworks such as VALUE are increasingly part of a global educational vocabulary, shaping how institutions conceptualize and evaluate student learning.

VALUE rubrics are widely used to structure outcomes such as critical thinking, integrative learning, and intercultural competence (Gray et al., 2019; Sobel, 2022; Ouellette, 2022). Their authentic assessment philosophy emphasizes local translation rather than universal application, encouraging faculty to adapt descriptors to disciplinary and cultural contexts. Research demonstrates their curricular and pedagogical adaptability across fields ranging from engineering to public health, as well as their use in portfolio-based curriculum evaluation (Yu et al., 2024; Harver et al., 2019; Gupta, 2022; Hsu & Ricoy, 2025). Studies also confirm their validity and reliability as measures of complex learning (Gleason et al., 2013; Gray et al., 2019), while highlighting their relevance for emerging domains such as creativity and critical thinking in engineering (Caratozzolo et al., 2022), teamwork (Andrés et al., 2023), and integrative global learning (Ouellette, 2022). Collectively, this evidence positions VALUE rubrics as both a structuring device for curriculum design and a measurement tool for capturing higher-order competencies.

Within this framework, the Creative Thinking rubric defines creativity through six interrelated dimensions: *Acquiring Competencies*, *Taking Risks*, *Solving Problems*, *Embracing Contradictions*, *Innovative Thinking*, and *Connecting/Synthesizing/Transforming*. These descriptors provide a developmental language for describing how students engage with uncertainty, iteration, and transformation, and many institutions

use them to track growth and guide curricular decisions. At the same time, the descriptors carry assumptions about how creativity should appear and progress—assumptions shaped in U.S. liberal education contexts and not necessarily aligned with other educational cultures. When rubrics travel internationally, they do more than measure learning; they reshape how creativity itself is understood, articulated, and justified. This dynamic raises important questions about interpretive equivalence, translation of descriptors, and calibration of judgment when rubric language crosses cultural boundaries.

Despite their global circulation, no study has examined how the Creative Thinking rubric is interpreted within Chinese private higher education, particularly in contexts where correctness norms, performance-driven logics, and institutional volatility dominate. In such settings, creativity may be demanded, monitored, and narrowly instrumentalized, making the rubric not only an evaluative tool but also a structuring device that influences how students and faculty conceptualize creative practice. This study therefore situates the Creative Thinking rubric as both a pedagogical counterweight—legitimizing creative processes that might otherwise be dismissed as inefficient—and an assessment translation tool that converts abstract dispositions into observable behaviors that satisfy institutional demands for measurable outcomes. By treating the rubric as simultaneously a conceptual lens and a practical scaffold, the present research extends the literature on VALUE by examining its cross-context applicability in a volatile private university ecology.

Volatile Institutional Ecologies: Private (Minban) Higher Education in China

The scale and growing significance of China's private (minban) higher education sector is striking. According to the *2023 National Statistical Bulletin on the Development of Education* (China Ministry of Education, 2024), there were 789 private higher education institutions nationwide in 2023, accounting for 25.67% of all higher education institutions. These included 391 regular undergraduate institutions, 22 undergraduate-level vocational schools, 374 higher vocational (specialist) colleges, and 2 adult higher education institutions. Enrollment in private regular and vocational undergraduate and specialist programs reached 9.94 million students, an increase of nearly 695,000 from the previous year, representing 26.34% of the national total. This expansion underscores the sector's growing role in absorbing demand for higher education and shaping the educational experiences of more than a quarter of China's undergraduate and vocational student population.

Historically, however, the minban sector has been marked by volatility. Rooted in community-managed schooling and reshaped by state reforms, it has long faced challenges of legitimacy, resource allocation, and governance ambiguity. Early analyses highlight chronic issues in teacher staffing, resource distribution, and institutional credibility, framing minban education as caught between state oversight and market pressures (nan, 2005). Subsequent scholarship deepens this structural perspective: Pan (2007) traces the evolution of the system, showing how policy experimentation and regulatory ambiguity shaped institutional autonomy and growth, while Wang and Chan (2015) demonstrate that despite theoretical autonomy, minban schools remain constrained by bureaucratic regulation and state reluctance to relinquish control. Ding's (2008) case study of Shanghai further reveals how minban

policies undergo “metamorphosis” during implementation, reflecting governance modes that tolerate local deviation while maintaining central authority.

More recent research situates minban colleges within China’s massified higher education system. Mok (2021) describes an “education market with Chinese characteristics,” where marketization, privatization, and transnational partnerships diversify provision but intensify governance dilemmas. Empirical studies highlight the pressures of performance evaluation, research demands, and the importance of social support and autonomy for teacher well-being (Chen et al., 2022). Student experience research shows that belonging, satisfaction, and achievement are mediated by emotion regulation and institutional climate (Tian et al., 2021). Pedagogical studies reveal that private colleges are active sites of instructional innovation—adopting blended learning (Zhang et al., 2024), AI-assisted vocabulary learning (Hao et al., 2025), and entrepreneurship education (Sun et al., 2025)—yet remain shaped by correctness-oriented cultures and accountability demands. Studies of student engagement with feedback (Pan et al., 2023) and interpersonal competence (Su et al., 2024) further illustrate the psychosocial complexity of minban learning environments.

Within such ecologies, abstract dispositions such as creativity, experimentation, and reflective inquiry may be perceived as “non-essential” unless translated into visible, measurable outcomes. This creates a paradox: private colleges are simultaneously testing grounds for pedagogical innovation and sites where innovation is structurally constrained. Their flexibility allows for curricular experimentation, yet their precarity incentivizes conservative, assessment-driven teaching. As Yang (2025) notes, even teacher activism in minban institutions reflects this tension, oscillating between local autonomy and national regulation. The minban sector therefore represents a volatile institutional ecology where educational innovation must continually negotiate with structural precarity, performance pressures, and correctness-oriented norms.

Creativity as Situated Practice: Art and Design as a Diagnostic Site

Across the preceding strands, a broader picture begins to take shape. As creativity research increasingly describes creative development as situated, relational, and socially mediated, two assumptions become difficult to maintain: that creativity can be treated as a stable cognitive trait, as implied by rubric descriptors, and that learning environments—particularly in Chinese private higher education—are neutral contexts rather than volatile ecologies that shape how creativity is enacted and interpreted. Studies of collaborative and dialogic pedagogies show how creative identities are formed through interaction (Page, 2012; Budge, 2012), while activity-theoretical work highlights the structuring influence of rules, tools, and socio-cultural norms (Kinsella, 2018). Even under disruption, students continue to renegotiate their creative practices within shifting learning conditions (Robertson et al., 2022). This relational view aligns closely with the institutional dynamics described in the previous literature strand, where correctness-oriented norms and performance pressures influence how students approach open-ended tasks.

Pedagogical design and motivation further shape how creativity is taken up. Inquiry-driven and project-based environments support creative engagement (Cheng et al., 2022; Clarke & Cripps, 2012), while intrinsic and achievement motivation influence divergent thinking and willingness to take intellectual risks (Kadyirov et al., 2024). Assessment practices also matter: teachers' conceptions of creativity shape how evaluative criteria are enacted (Leong & Qiu, 2013), and students often recalibrate their self-judgments when confronted with abstract descriptors (Parker, 2005). These dynamics are intensified in minban settings, where assessment language must be interpreted within cultures of accountability and exam-oriented correctness.

Creativity is also culturally situated. Research in Chinese design contexts shows how creative practice is shaped by heritage, identity, and socio-cultural expression (Wang, 2022). When global frameworks such as the VALUE Creative Thinking rubric enter this landscape, they encounter interpretive frictions: descriptors shaped in U.S. liberal-education traditions meet students whose evaluative habits are formed within performance-driven institutional ecologies. Creativity, in such contexts, is not only enacted but translated and negotiated.

These converging strands point to the analytical value of art and design as a site of inquiry. Even in a history-based course, students engage in interpretive positioning, historically grounded ideation, and the recombination of visual and conceptual materials. These forms of situated creativity make visible how students navigate uncertainty, contradiction, and synthesis—precisely the dimensions that global rubrics attempt to capture. Art and Design History therefore offers a revealing vantage point for examining how creativity is articulated and understood when global assessment language meets local institutional realities.

The distinctiveness of this study lies in bringing these literatures into direct conversation. Rather than treating creativity, institutional ecology, and assessment as separate domains, the study examines how they interact in practice. By using an Art & Design History course as a diagnostic site, it becomes possible to see how a global rubric is interpreted, where its language aligns with students' lived experience, and where it fails to register situated, materially grounded forms of learning. This perspective sets the stage for the methodological approach that follows, which treats creativity not as a fixed trait to be measured but as a process shaped by the institutional and linguistic conditions under which students learn to describe it.

Methodology

This study adopted a mixed-methods case study design to examine the effectiveness of an interactive Art & Design History course and to investigate how the AAC&U Creative Thinking VALUE rubric operates when transferred into a Chinese private university context. A mixed-methods approach was appropriate because the research questions required both an outcome-oriented account of pre/post changes in students' self-assessed creative thinking and a process-oriented understanding of how students experienced interactive tasks and interpreted rubric language.

The design was guided by two complementary lenses: a social-constructivist view of interactive learning and a constructive-alignment/assessment-literacy perspective on rubric transfer. These lenses address a persistent challenge in Art and Design History teaching, where courses are often perceived as overly textual, passive, and disconnected from creative engagement. Prior scholarship has noted that history-related art and design courses risk becoming content-heavy and weakly dialogic, limiting students' interpretive agency (Efland, 2002; Freedman, 2003; Chi & Wylie, 2014). The present study responds to this challenge by treating creativity not as an add-on but as a structural means of reanimating historical learning. Interactive tasks were designed to reposition history as a site of inquiry, interpretation, and recombination (Borland & Siddons, 2018; Chandler et al., 2021).

A second methodological innovation lies in the dual use of the VALUE Creative Thinking rubric: not only as an evaluative instrument but also as a design scaffold that aligns creative engagement with historically grounded learning goals. This dual function enabled the study to examine how a U.S.-developed assessment vocabulary behaves when embedded in a minban institutional ecology where assessment literacy, linguistic abstraction, and correctness-oriented norms shape students' interpretation of rubric language (Core, 2017; Yu et al., 2024). Integrating creativity-driven pedagogy with cross-context assessment analysis positions the study to contribute methodologically to research on creativity, assessment transfer, and higher-education teaching in art-and-design programs.

Context and Participants

The case was situated in an undergraduate Art & Design History elective at Shanghai Jian Qiao University, a regular Chinese private undergraduate institution where students often enter with limited experience in open-ended, criteria-referenced evaluation. The course was delivered during the 2024–2025 academic year within the School of International Design. The original cohort comprised 22 students from different majors. All were invited to participate in the study; complete paired pre/post survey data were obtained from 13 students, who formed the analytic sample for quantitative comparison. The same 13 students, representing a range of majors and initial ability levels, also participated in semi-structured interviews to capture diverse perspectives on learning processes and rubric interpretation.

Intervention Design

The experimental course was structured to counteract the volatility and correctness-oriented tendencies of private colleges by embedding interactive, inquiry-driven learning into an Art & Design History context. Drawing on research in STEAM creativity (Cheng et al., 2022) and socially situated creative practice (Budge, 2012; Page, 2012), the course design incorporated three principles.

Structured risk-taking. Students engaged in iterative interpretive tasks where uncertainty and provisional thinking were normalized and framed positively through the VALUE dimensions of *Taking Risks* and *Embracing Contradictions*. This approach directly challenged the results-oriented mindset common in minban settings.

Multimodal inquiry. Activities encouraged students to work across visual, textual, and historical materials, using comparison, re-contextualization, and recombination to explore unfamiliar ideas and perspectives. This multimodal emphasis supported historically grounded ideation without relying on technical studio production.

Reflective translation. Students articulated their interpretive and creative decisions using VALUE-aligned language, linking their learning processes to institutional expectations for demonstrable outcomes. This reflective component was especially important in a context where creativity must be justified through visible evidence of learning.

These principles operationalized creativity not as an innate trait but as a learnable, assessable, and socially embedded practice—an approach that aligns with both the VALUE framework and the institutional realities of Chinese private higher education.

The intervention was embedded across eight sessions (32 class hours) and combined lecture elements with structured interactive components designed to support historical understanding, interpretation, and transfer to design thinking. Five activity types formed the core of the intervention:

- **Structured small-group discussion,** using prompts focused on comparison, interpretation, and evidence-based explanation.
- **Student-led research presentations,** requiring students to search, read, and synthesize historical sources.
- **Timeline game activities,** in which students collaboratively organized movements and designers chronologically and justified their decisions.
- **Role-play/drama tasks,** where students re-situated historical concepts in communicative scenarios.
- **Historical design re-creation tasks,** requiring students to research and transform historical visual patterns into contemporary design outputs.

These activities were intentionally aligned with the VALUE Creative Thinking rubric, with the expectation that they would activate disciplinary knowledge-building, connection-making, historically grounded ideation, and interpretive positioning.

Instruments and Operationalization

VALUE Creative Thinking rubric. The AAC&U VALUE Creative Thinking rubric defines creative thinking through six subdimensions: *Acquiring Competencies*, *Taking Risks*, *Solving Problems*, *Embracing Contradictions*, *Innovative Thinking*, and *Connecting, Synthesizing, Transforming*. In this study, these subdimensions were operationalized as self-assessment constructs on a VALUE-prescribed 1–4 Likert scale. Items were adapted from rubric descriptors for student self-rating rather than external scoring, with attention to maintaining conceptual fidelity while ensuring interpretability for students with limited assessment literacy.

Pre-/post-course surveys. A pre-course survey was administered at the start of the course, and a post-course survey was administered after the eight-session intervention. Both used the same six-subdimension structure. The analytic sample for paired comparison comprised 13 students with complete responses. Given the small sample size and self-report nature of the data, the surveys were used descriptively to identify patterns of change and potential areas of measurement friction.

Semi-structured interviews. Semi-structured interviews were conducted with the same 13 students after the intervention. Each interview lasted approximately 30 minutes and was conducted offline. Audio was recorded via mobile device, and sessions were simultaneously captured through Tencent Meeting to generate initial transcripts. Interviews focused on how students experienced specific interactive activities, which VALUE dimensions they perceived as activated, and how they understood and responded to rubric-based self-assessment items, particularly where descriptors felt abstract or difficult to interpret.

Data Analysis

Quantitative analysis. Pre- and post-course self-assessment scores were analyzed using paired-samples t-tests for the 13 students with complete data. For each subdimension, mean scores, standard deviations, mean differences, and p-values were calculated. Given the small N and self-report format, results were interpreted cautiously as descriptive indicators that may reflect recalibration of internal standards, comprehension of descriptors, and response-process issues.

Qualitative analysis. Interview transcripts were analyzed thematically. Initial coding identified references to specific activities, perceived learning gains, and interpretations of rubric language. Codes were then grouped into themes representing pedagogical affordances and measurement frictions. For each VALUE subdimension, qualitative evidence was synthesized into a cross-context fit matrix, distinguishing where interactive tasks supported learning and where rubric language or survey procedures introduced interpretive challenges. This analysis informed the integrative model presented in the Discussion, which differentiates pedagogical activation from measurement sensitivity.

Research Ethics Statement

This study was conducted in accordance with the ethical standards of Shanghai Jian Qiao University and the principles outlined in the Declaration of Helsinki. Ethical approval was obtained from the Research Ethics Committee, Office of Research, Shanghai Jian Qiao University. All participants were informed about the purpose and procedures of the study, and written informed consent was obtained prior to participation. Confidentiality and anonymity were strictly maintained throughout data collection, analysis, and reporting. Participation was voluntary, and students were assured that their decision to participate or withdraw would have no impact on their academic standing.

Results

Quantitative Results

Pre- and post-course self-assessment data were available for 13 students who completed both surveys using the six VALUE-aligned dimensions (*Acquiring Competencies*, *Taking Risks*, *Solving Problems*, *Embracing Contradictions*, *Innovative Thinking*, and *Connecting/Synthesizing/Transforming*). Each item was rated on a 1–4 VALUE-prescribed scale, with higher scores indicating stronger self-perceived creative thinking. The pre/post pattern showed uneven movement across dimensions, with one statistically significant change and several small, non-significant shifts. (see **Table 1**).

Table 1. Pre/Post Means (VALUE Creative Thinking Rubric, 1–4 Scale)

Dimension	Mean (Pre)	Mean (Post)	Δ Mean	Significance	Notes
Acquiring Competencies	2.85	2.54	−0.31	Not significant	
Taking Risks	2.23	2.46	+0.23	Not significant	
Solving Problems	2.69	2.08	−0.62	p = .025	Statistically significant decrease
Embracing Contradictions	1.77	1.54	−0.23	Not significant	
Innovative Thinking	2.69	2.92	+0.23	Not significant	
Connecting, Synthesizing, Transforming	2.69	2.69	0.00	Not significant	

Note: Composite Score (Average of 6 Dimensions): pre-course: 2.49; post-course: 2.37; Δ mean: −0.12 (Not significant)

Acquiring Competencies (creative imitation) decreased from approximately $(M_{\text{pre}} \approx 2.85)$ to $(M_{\text{post}} \approx 2.54)$. The widening standard deviation at post-test suggests increased dispersion in how students judged their foundational skills after the course. *Taking Risks* (creative risk-taking) increased modestly from $(M_{\text{pre}} \approx 2.23)$ to $(M_{\text{post}} \approx 2.46)$, a small, non-significant change consistent with the course's emphasis on structured risk-taking but insufficient to reach statistical significance.

The most notable quantitative pattern occurred in *Solving Problems*, where the mean declined from $(M_{\text{pre}} \approx 2.69)$ to $(M_{\text{post}} \approx 2.08)$. A paired-samples t-test indicated that this decrease was statistically significant at the .05 level, with a medium effect size $(Cohen's\ (d)$ in the approximate range of $(-0.5)\ to\ (-0.7))$. This suggests that students rated their problem-solving ability more conservatively after the course than before. *Embracing Contradictions* also showed a small decrease from $(M_{\text{pre}} \approx 1.77)$

to $(M_{\text{post}} \approx 1.54)$, remaining the lowest-rated dimension at both time points and exhibiting limited movement overall.

For *Innovative Thinking*, the mean increased slightly from $(M_{\text{pre}} \approx 2.69)$ to $(M_{\text{post}} \approx 2.92)$, a small positive shift that approached but did not reach significance. *Connecting, Synthesizing, Transforming* remained unchanged at $(M_{\text{pre}} = M_{\text{post}} \approx 2.69)$, despite qualitative evidence of integrative learning.

To complement the subdimension analysis, a composite creative-thinking score was calculated by averaging the six items at pre- and post-test. The composite mean decreased slightly from approximately $(M_{\text{pre}} \approx 2.49)$ to $(M_{\text{post}} \approx 2.37)$, a small negative change with a negligible effect size and a non-significant p-value. This pattern indicates that, when aggregated, students did not report a clear overall increase in creative thinking; instead, they showed a subtle tendency toward more conservative self-evaluation.

The subdimension and composite analyses suggest that the intervention did not simply inflate self-confidence. Rather, students' internal standards for judging their own creative thinking appear to have shifted, particularly in domains involving open-ended problem solving and handling contradictions. The quantitative profile therefore reflects not only learning outcomes but also response-shift dynamics, interpretive uncertainty, and the influence of correctness-oriented norms on self-assessment.

Qualitative Results

The qualitative data from interviews and open-ended post-course responses reveal a richer and more optimistic picture of learning than the self-assessment scores alone suggest. Students consistently described interactive activities as engaging, memorable, and instructionally meaningful (see **Table 2**).

Table 2. VALUE Creative-Thinking Dimensions: Observed Affordances and Frictions

VALUE Creative-Thinking rubric dimension	Observed affordances in the interactive Art & Design History course	Observed frictions / measurement challenges	Representative student evidence
Acquiring Competencies	Students described clearer historical structuring, improved terminology use, and stronger chronological understanding through presentations, readings, and timeline activities.	Decline in scores reflects raised internal standards; descriptors remain generic and do not capture discipline-specific literacy (e.g., visual analysis, historical interpretation).	"Preparing PPT presentations forced me to carefully read books and search for extended materials… The timeline game helped me systematically sort out the context of design history."
Taking Risks	Group discussions and interpretive tasks provided relatively "safe" spaces to voice personal interpretations and move beyond copying.	Fear of being "wrong" limited willingness to take intellectual risks; abstract phrasing felt distant from students' everyday language.	"I was afraid of making mistakes, so I avoided proposing personal insights… If there were clearer examples, it would be easier to answer."
Solving Problems	Project-based historical re-creation tasks required students to research, reinterpret, and apply historical patterns to contemporary briefs, which students found demanding but meaningful.	Score decline reflects recalibration: students realized the complexity of historically grounded problem-solving and rated themselves more conservatively, which is in line with the Dunning-Kruger inversion effect.	"We had to research and re-create patterns from history to solve a design problem… I didn't realize before how granularly creativity can be conceived."
Embracing Contradictions	Comparative discussions of different historical interpretations and styles had potential to activate this dimension.	Students found the descriptor vague; harmony-seeking norms and correctness-orientation discouraged acknowledging contradiction.	"The questions are too abstract… I didn't fully understand what the question was asking… I was not sure what counts as 'contradiction'."
Innovative Thinking	Students reported shifting inspiration sources from social media toward books, articles, and historical cases; they described combining historical styles in new ways.	Despite perceived gains, scores still slight increase; some students still limit themselves to "safe" ideas due to grading concerns and time pressure.	"Usually, I got inspiration from social media… after this class I started to get inspiration from books and articles, even historical events… I can now combine different historical styles to create my own work."
Connecting, Synthesizing, Transforming	Timeline games, whiteboard mapping, and role-play supported linking movements, designers, and contemporary visuals; students described "seeing the big picture" and recognizing motifs in daily life.	Abstract terminology and uncertainty about how to scale experiences into score changes led to conservative mid-range responses.	"The timeline game helped me check if I had the big picture of design history… After learning Art Deco, things I see in the elevator or online suddenly connect to what we learned. I feel I can build new connections."

Knowledge-building and historical structuring. Students repeatedly highlighted the timeline-based whiteboard activities and games as helping them "systematically sort out the context of design history" and gain "a very clear understanding of the sequence of specific art movements." Research-based PPT presentations were described as forcing deeper reading and information seeking, with one student noting that preparing a presentation "forced me to carefully read books and search for extended materials." These accounts align closely with *Acquiring Competencies* and *Connecting, Synthesizing, Transforming*.

Historically grounded ideation and inspiration practices. Project-oriented "historical design re-creation" tasks and drama/role-play activities were described as especially powerful for stimulating historically grounded ideation. Students reported shifting their inspiration sources from social media toward books, articles, and historical events, and described being able to "combine different historical styles to create my own work." Others mentioned that after learning about Art Deco, "things I see in the elevator or online suddenly connect to what we learned," suggesting spontaneous transfer from course concepts to everyday visual culture. These narratives map directly onto *Innovative Thinking* and *Connecting, Synthesizing, Transforming*.

Descriptor interpretation and assessment-literacy challenges. Students also described difficulties interpreting the rubric-based self-assessment items. Several reported that the questions were "too abstract" and that they were "not sure what counts as 'contradiction'," particularly for *Embracing Contradictions* and creative connection. In dimensions implying uncertainty or dissent, such as *Taking Risks*, students acknowledged being "afraid of making mistakes" and therefore avoiding personal insights, both in classroom talk and in self-ratings.

These comments indicate that correctness-oriented norms and limited assessment literacy led students to under-endorse rubric language that rewards risk, ambiguity, or contradiction, even when interactive teaching was beginning to shift their practices.

Quantitative–Qualitative Mismatching

Across the dataset, pedagogical activation and measurement sensitivity moved on different trajectories. Students described substantial gains in historical knowledge-building, integrative understanding, and historically grounded ideation, yet these developments were only partially—sometimes not at all—reflected in their self-assessment scores. This divergence is the central empirical pattern of the study.

The statistically significant decline in *Solving Problems* stands in sharp contrast to students' accounts of project-based tasks that required them to research, reinterpret, and redesign historical patterns to address concrete design challenges. Students consistently framed these tasks as demanding, meaningful, and creatively generative, yet their post-course ratings became more conservative as their understanding of what "problem-solving" entails deepened. This reflects a recalibration of internal standards rather than a decline in capability.

A similar mismatch appears in *Connecting, Synthesizing, Transforming*. Students offered vivid descriptions of recognizing historical motifs in everyday visual culture, linking movements across periods, and integrating new sources of inspiration. These narratives indicate strong activation of integrative thinking, yet the quantitative scores remained flat. The rubric's abstract phrasing and the difficulty of translating lived interpretive experiences into numerical self-ratings contributed to this stagnation.

Even the modest increase in *Taking Risks* diverges from students' descriptions of cautious self-presentation, fear of being wrong, and reluctance to claim interpretive authority. Interactive activities created opportunities for exploratory thinking, but correctness-oriented norms and limited assessment literacy constrained how students evaluated themselves.

These mismatches indicate that the VALUE Creative Thinking rubric, when used as a self-assessment tool in this context, was shaped by descriptor abstraction, cultural norms of correctness, and response-shift dynamics. The quantitative results therefore capture not only learning but also the interpretive friction inherent in transferring a U.S.-developed assessment instrument into a Chinese private art-and-design program. The qualitative evidence reveals learning processes that the rubric could

not fully register, underscoring the need to distinguish between pedagogical activation and measurement sensitivity in cross-context assessment work.

Discussion

The study examined the pedagogical effectiveness and cross-context assessment dynamics of an interactive Art and Design History course at a Chinese private university, using the VALUE Creative Thinking rubric as both a conceptual anchor and a self-assessment tool. The findings reveal a core tension: interactive teaching activated historically grounded, interpretive, and integrative forms of creativity, yet rubric-based self-assessment did not fully capture this learning. This divergence is best understood through five interlocking concepts: recalibration, descriptor reinterpretation, localization friction, situated creativity, and the distinction between structuring device and measurement tool.

Recalibration: Learning as a Horizon, Not a Score

The statistically significant decline in *Solving Problems*, alongside the flat composite score, suggests that students recalibrated their internal standards as they engaged more deeply with creative tasks. Rather than indicating a loss of capability, the decline reflects a Dunning–Kruger-like inversion: students became more aware of what creative problem-solving entails and thus rated themselves more conservatively. This pattern aligns with research on response-shift and self-assessment recalibration (Leong & Qiu, 2013; Parker, 2005) and is especially salient in minban contexts where correctness norms and exam-oriented cultures shape evaluative behavior (Pan et al., 2023; Su et al., 2024).

Descriptor Reinterpretation: Friction at the Language Level

Students' qualitative feedback revealed consistent confusion around abstract descriptors such as "contradiction" and "creative connection." These terms, while central to the VALUE framework, were interpreted differently in the local context. Embracing Contradictions was often seen as vague or culturally dissonant, with students unsure how to map their classroom experiences onto rubric language. This echoes findings from Kinsella (2018) and Page (2012), who emphasize that creativity is shaped by socio-cultural norms and classroom discourse. In minban settings, where performance-driven logic dominates (Mok, 2021; Chen et al., 2022), abstract descriptors may require rewording or anchoring in discipline-specific examples to support valid interpretation.

Localization Friction: When Rubrics Travel, Meaning Must Be Rebuilt

The VALUE Creative Thinking rubric, developed in a U.S. liberal education context, assumes a shared interpretive framework that may not hold in Chinese private art and design programs. While prior studies have demonstrated VALUE's adaptability in STEM and public health (Yu et al., 2024; Harver et al., 2019), none have examined its performance in art-and-design history or in volatile minban ecologies. This study shows that localization is not merely a matter of translation but of epistemic alignment. Students in this context operate within institutional environments marked by instability, instrumentalism, and

performance pressure (Pan, 2007; Sun et al., 2025). Under such conditions, rubric language must be recontextualized to reflect local pedagogical goals and cultural logics.

Situated/Material Creativity: Learning That Rubrics Miss

Despite limited movement in self-assessment scores, students described rich learning experiences that align with contemporary theories of creativity as situated, relational, and historically grounded (Budge, 2012; Robertson et al., 2022; Clarke & Cripps, 2012). Timeline games, drama activities, and historical re-creation tasks supported multimodal inquiry and interpretive agency—forms of creativity central to art and design education but difficult to capture through generic descriptors. These findings reinforce the argument that creativity in art and design is enacted through interaction with historical materials, cultural references, and interpretive tasks, and that assessment must be sensitive to these modalities.

Structuring Device vs Measurement Tool: Reframing VALUE's Role

The VALUE rubric functioned effectively as a pedagogical scaffold—guiding task design, framing reflection, and legitimizing creative processes within a results-oriented institutional culture. However, its role as a measurement tool was constrained by descriptor abstraction, response-process confusion, and cultural norms of self-presentation. This distinction echoes the dual function proposed by Gray et al. (2019) and Sobel (2022): rubrics can support learning even when their measurement sensitivity is limited. In minban contexts, where students may lack experience with open-ended, criteria-referenced self-evaluation (Tian et al., 2021; Wang & Chan, 2015), VALUE rubrics should be treated as structuring devices that support pedagogical coherence, not as plug-and-play instruments for summative assessment.

Localization Directions: What to Retain, What to Reframe

A dual strategy for rubric localization emerges:

- Retain and foreground: Acquiring Competencies, Connecting/Synthesizing/Transforming, and Innovative Thinking—dimensions that aligned well with course goals and student experiences.
- Rephrase and anchor: Taking Risks and Embracing Contradictions—dimensions requiring discipline-proximal language and concrete exemplars.
- Supplement: Add anchors for visual analysis and historically informed design reasoning, which were repeatedly evidenced in student narratives but not fully captured by existing descriptors.

These recommendations align with calls for rubric adaptation in culturally diverse settings (Gupta, 2022; Ouellette, 2022) and reflect the need to design assessment tools that are both conceptually robust and contextually legible.

Broader Significance: Creativity as Horizon, Assessment as Co-Construction

The study contributes to research on creativity, assessment, and cross-context transfer by showing that creativity behaves like a horizon—expanding as students approach it and resisting flattening into static scores. Art and Design History, as a discipline of interpretation and recombination, is an ideal stress-test for creativity assessment. The findings suggest that global rubrics like VALUE must be co-constructed with local pedagogical cultures, especially in volatile institutional ecologies. Creativity, in this view, is not a trait to be measured but a process to be supported, interpreted, and continually redefined.

Conclusion

Across the three strands of literature reviewed—VALUE rubric globalization, the institutional ecology of Chinese private colleges, and creativity in art and design education—no existing study has brought these domains into direct methodological dialogue. This research addresses that gap by showing how a global assessment instrument behaves when embedded within a volatile, culturally specific, and pedagogically experimental classroom. Whereas prior work has conceptualized creativity as cognitive divergence, technological augmentation, or culturally rooted expression, the present study demonstrates how creativity is refracted through assessment language, institutional norms, and students' evolving interpretive resources.

The study advances the field methodologically in three ways. First, it integrates pre/post self-assessment data with qualitative evidence of situated creative practice, revealing how response-shift dynamics reshape students' internal standards as they engage in multimodal, historically grounded tasks. Although earlier research has examined creativity development or rubric validity, none have combined these strands to diagnose how learning and measurement diverge in real time. Second, it introduces a descriptor-level analysis of rubric interpretation, showing how abstract VALUE terms undergo cultural and linguistic reinterpretation in minban settings—an analytic move absent from both the creativity and VALUE literatures. Third, by situating assessment within the volatile ecologies of Chinese private colleges, the study develops a context-sensitive mixed-methods approach that treats institutional conditions not as background variables but as active forces shaping how students understand, perform, and report creativity.

These methodological innovations support a broader theoretical claim: global assessment frameworks must be co-constructed with local pedagogical cultures, especially in contexts where correctness norms, performance pressures, and institutional precarity shape students' evaluative behavior. The significant decline in Solving Problems and the flat composite score are therefore not indicators of pedagogical failure but reflections of recalibration, descriptor ambiguity, and cultural norms surrounding risk, contradiction, and self-presentation.

Overall, the study offers the first empirical mapping of the intersection between global assessment frameworks, situated creative practice, and the institutional logics of Chinese private art and design education. By revealing how pedagogical activation and measurement sensitivity diverge—and by identifying where localization is necessary—the research provides a methodological foundation for

rethinking how creativity can be taught, supported, and assessed in contexts where global models meet local realities.

Declarations

Data Availability Statement

All data and materials supporting the findings of this study are accessible as supplementary files. These include:

1. Variable definitions and coding scheme, detailing level-to-numeric conversions, transformation rules, and analytic procedures.
2. Course documentation, including the full syllabus and assessment plan for the interactive Art & Design History course.
3. Survey instruments (pre- and post-assessment questionnaires) corresponding to the VALUE Creative Thinking rubric.
4. Full raw datasets from the pre- and post-VALUE Creative Thinking surveys (timestamped responses, item-level selections, and student IDs).
5. Cleaned and transformed datasets, including aligned pre/post records, numeric coding of rubric-aligned items, and computed differential scores.
6. Follow-up student interview transcripts, containing anonymized qualitative data used for triangulation.

All datasets have been anonymized to protect participant confidentiality. Additional materials may be made available from the corresponding author upon reasonable request and subject to institutional approval.

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