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A Literature Review on the Relationship Between Creative Thinking and Academic Satisfaction Among Undergraduate Students Majoring in Art and Design in China

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ABSTRACT: This literature review explores the relationship between creative thinking and academic satisfaction among undergraduate students majoring in art and design in China. It highlights the growing global and national emphasis on fostering creativity in higher education, particularly within creative disciplines like art and design. The review establishes a theoretical framework by defining creative thinking as a multifaceted cognitive process involving divergent and convergent thinking, and academic satisfaction as a subjective evaluation of the educational experience. It synthesizes existing research on creative thinking cultivation in art and design education, academic satisfaction in Chinese higher education, and the limited studies connecting these two constructs. Key findings indicate a significant research gap regarding the direct relationship between creative thinking and academic satisfaction within the specific context of Chinese art and design undergraduates. The review identifies methodological limitations, such as the predominance of cross-sectional studies, and the under exploration of cultural dimensions. It concludes by proposing future research directions, including longitudinal and experimental studies, investigation of mediating variables like self-efficacy, and culturally sensitive approaches to better understand this relationship and inform educational practices.

KEYWORDS: Creative thinking, Academic satisfaction, Art and design education in China, Creativity cultivation, Academic experience evaluation.

I. INTRODUCTION

In the 21st century, fostering creativity has emerged as a global educational imperative, crucial for driving innovation, economic competitiveness, and societal progress (UNESCO, 2020). This emphasis is increasingly visible within China's higher education landscape, where national policies highlight the development of creative and innovative talents as key to the nation's future prosperity (Ministry of Education of China, 2019). Within this context, disciplines such as art and design are inherently positioned at the forefront of creative cultivation, with creative thinking considered a fundamental competency for both academic success and professional contribution (Smith & Jones, 2018). As Chinese universities continue to evolve and adapt to global standards while retaining their unique characteristics, understanding the factors that nurture creativity, particularly within demanding creative fields, becomes vital.

Concurrently, academic satisfaction stands as a critical metric for evaluating the quality of the student learning experience, curriculum effectiveness, and overall educational outcomes (Chen, 2021). High levels of student satisfaction are widely associated with numerous positive indicators, including enhanced engagement, increased motivation, improved retention rates, and better academic performance (Baker & Siryk, 1984; Johnson & Lee, 2019). For art and design students, whose academic journey often involves subjective critique, iterative processes, and dealing with ambiguity inherent in creative work, satisfaction with the educational environment, teaching methodologies, and feedback mechanisms can significantly impact their perseverance and development. Therefore, exploring the relationship between the cultivation and expression of creative thinking and the level of satisfaction experienced by students in these specific disciplines holds substantial practical significance for educators and institutions seeking to optimize learning environments and support student success.

Examining this relationship specifically within the context of art and design undergraduate students in China is crucial due to the unique blend of traditional and evolving pedagogical approaches, as well as distinct socio-cultural influences present in the Chinese higher education system (Zhou,

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2019). Chinese art and design education has historically emphasized foundational skills, while increasingly incorporating Western-influenced conceptual and contemporary creative methodologies. Furthermore, factors such as the intense pressure stemming from the Gaokao (college entrance examination), strong parental expectations, peer competition, and specific cultural perceptions of success and creativity may uniquely shape how students perceive their academic experience and evaluate their satisfaction within a creative curriculum (Wu & Zhao, 2022). These contextual elements suggest that the dynamics between creative thinking development and academic satisfaction among Chinese art and design students may differ from those observed in other cultural or educational settings, necessitating a focused review of the available literature.

Based on the aforementioned background and rationale, this literature review aims to systematically explore and synthesize existing research pertaining to the relationship between creative thinking and academic satisfaction among undergraduate students, with a specific focus on the context of art and design education in China. By critically examining relevant studies, this review seeks to consolidate current knowledge, identify key findings regarding the potential links between these two constructs, highlight the gaps and limitations in the existing body of literature (particularly concerning the specified population and context), and propose valuable directions for future research to deepen our understanding of this complex relationship.

II. THEORETICAL FRAMEWORK AND KEY CONCEPTS

(1). Creative Thinking. Creative thinking is a complex cognitive process generally understood as the ability to generate novel and useful or valuable ideas, solutions, or products (Amabile, 1996). While often associated with divergent thinking – the ability to produce a wide range of possible solutions from a single starting point (Guilford, 1956) – it also involves convergent thinking, which is necessary for evaluating and selecting the most promising ideas and developing them (Runco, 2003). Early models, such as Wallas's (1926) stages (preparation, incubation, illumination, verification), describe the process involved. More contemporary perspectives, like the investment theory of creativity, highlight the confluence of multiple factors – including intellectual abilities, knowledge, thinking styles, personality traits, motivation, and environmental influences – as necessary for creativity (Sternberg & Lubart, 1991). In art and design, creative thinking is paramount, involving conceptualization, problem-solving through visual and material exploration, and the generation of original aesthetic or functional forms. The assessment and fostering of these multifaceted creative processes are central to the curriculum in these fields.

(2). Academic Satisfaction. Academic satisfaction refers to a student's subjective evaluation of their educational experience (Elliott & Shin, 2002). It is generally considered a multi-dimensional construct, encompassing various facets of the academic environment. Common dimensions explored in research include satisfaction with the quality of teaching and instruction, the relevance and structure of the curriculum, interactions with faculty and peers, available learning resources (e.g., library, studios, technology), campus facilities, and administrative services (Astin, 1993; Elliott & Shin, 2002). Student satisfaction reflects their feelings and attitudes towards different aspects of their university life and is often viewed as an indicator of perceived educational quality and a predictor of student engagement, retention, and overall well-being. For art and design students, satisfaction may also be influenced by factors specific to their field, such as satisfaction with studio environments, access to specialized equipment, the quality of critique sessions, and the perceived value of creative projects.

(3). Relevant Theories. Understanding the potential relationship between creative thinking and academic satisfaction can draw upon various theoretical frameworks. Guilford's Structure of Intellect Theory provides a comprehensive model for understanding the structure of human intelligence (Guilford, 1967). This theory classifies intellectual factors into three dimensions: Operations (e.g., cognition, memory, divergent production, convergent production, evaluation), Contents (e.g., figural, symbolic, semantic, behavioral), and Products (e.g., units, classes, relations, systems, transformations, implications). Creative thinking within this framework is primarily associated with the "divergent production" operation, which emphasizes the ability to generate multiple possible outcomes from given information. While this theory primarily focuses on the components of creative ability, it can inspire us to consider how students perceive competence when utilizing their specific intellectual abilities (such as divergent production), which may indirectly influence their academic satisfaction.

Simultaneously, Bandura's Social Cognitive Theory offers a more explanatory

framework for understanding how the interaction among personal factors, behavior, and environment influences learning and development (Bandura, 1986). Key concepts within this theory include self-efficacy (an individual's belief in their ability to execute specific tasks) and outcome expectations (an individual's anticipation of the results that specific behaviors will yield). In the academic context, Social Cognitive Theory suggests that students' behavior (e.g., engaging in creative projects, seeking feedback) is influenced by their belief in their own creative abilities (creative self-efficacy) and environmental factors (e.g., teaching style, peer support). Conversely, successful or supported creative behavior can enhance students' creative self-efficacy and academic satisfaction. Thus, Social Cognitive Theory can help us explore how certain characteristics of the university environment, by influencing students' creative self-efficacy and expectations regarding the outcomes of creative learning, may consequently link the manifestation of creative thinking and academic satisfaction.

III. REVIEW OF EXISTING LITERATURE

This section provides a critical review and synthesis of existing research relevant to creative thinking and academic satisfaction, with a particular focus on higher education and the specific context of art and design in China. It is divided into three subsections covering research on creative thinking in art and design education, academic satisfaction in Chinese higher education, and existing studies exploring the relationship between these two constructs.

A. Research on Creative Thinking in Art and Design Education

Creative thinking is widely recognized as the cornerstone of art and design practice and education. Literature in this area extensively discusses various methods employed to cultivate this essential skill. Studio pedagogy, a long-standing tradition in art and design schools, is often highlighted for its potential to foster creativity through hands-on learning, iterative processes, and direct interaction with materials and peers (Smith & Jones, 2018). Contemporary approaches build upon this, incorporating methodologies such as project-based learning, design thinking frameworks, and emphasis on experimentation and risk-taking (Runco, 2003; Cross, 2011). Educators utilize varied assignments that encourage divergent thinking, problem-solving, and conceptual development, often integrated with theoretical studies and critical analysis (Amabile, 1996; Sternberg & Lubart, 1991). Collaborative projects and peer feedback sessions are also considered vital in exposing students to different perspectives and refining ideas (Brown, 2008). Furthermore, the integration of new technologies and digital tools is increasingly seen as a way to expand creative possibilities and expression in design fields (Lee & Kao, 2020).

However, research concerning creativity within the Chinese educational context, particularly at the university level, also points to specific cultural and systemic constraints that may impact the cultivation of creative thinking. While there is a growing policy emphasis on innovation (Ministry of Education of China, 2019), the implementation in classrooms can face challenges. Traditional teaching methods, which may emphasize rote learning, foundational skills repetition, and teacher-centered instruction, can sometimes constrain the open-ended exploration necessary for divergent thinking (Zhou, 2019; Li & Zhang, 2019). The high-stakes nature of national examinations (like the Gaokao) and parental/societal pressures regarding academic achievement and future employment can foster a risk-averse mindset among students, potentially discouraging them from unconventional approaches or challenging established norms, both of which are crucial for significant creative breakthroughs (Wu & Zhao, 2022). In art and design critiques, cultural respect for authority figures (teachers) might sometimes lead to students being less inclined to defend their unconventional ideas or challenge feedback, potentially limiting the development of confidence in their creative judgment (Wang, 2021). Therefore, while methods for cultivating creativity exist globally and are being adopted in China, their effectiveness may be mediated by unique cultural and structural factors within Chinese classrooms.

B. Research on Academic Satisfaction in Chinese Higher Education

Academic satisfaction among university students in China has been a significant area of research, reflecting its importance for student success, institutional reputation, and educational reform. Studies consistently show that overall student satisfaction levels are influenced by a complex interplay of factors, including the quality of teaching, availability and accessibility of learning resources (library, labs, technology), curriculum relevance, campus environment, and support services (Chen, 2021; Zhao & Liu, 2018). Development trends indicate a rising expectation among students for more student-centered teaching methods, practical skill development, and clearer pathways to employment (Zhang & Wang, 2020). Satisfaction research in China is also increasingly

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utilizing refined instruments to capture the multi-dimensional nature of the student experience (Liu et al., 2019).

Focusing specifically on art and design students in Chinese higher education reveals some distinct factors influencing their academic satisfaction. Practical conditions are frequently cited as highly influential. Access to adequate studio space, specialized equipment (e.g., digital labs, workshops), and materials directly impacts their ability to execute creative projects effectively, thus affecting their satisfaction (Sun & Jiang, 2022). The perceived difficulty and workload of art and design courses, which often involve intensive practical work and tight deadlines, can also impact satisfaction levels, sometimes leading to stress if not managed well (Tang, 2021). Furthermore, the quality and nature of teacher feedback in critiques and project evaluations are particularly critical in these disciplines. Constructive, specific, and timely feedback is highly valued, while vague or overly harsh criticism can lead to dissatisfaction and discourage creative exploration (Li & Chen, 2023). The relevance of the curriculum to current industry trends, opportunities for exhibitions or real-world projects, and the perceived value of the degree in the job market are also significant contributors to satisfaction for art and design majors (Wang & Zhao, 2022). These findings suggest that while general factors of satisfaction apply, the unique pedagogical methods and resource needs of art and design significantly shape the student experience in this field within China.

C. Research on the Relationship between Creative Thinking and Academic Satisfaction

Research directly exploring the relationship between creative thinking and academic satisfaction is relatively nascent, particularly when considering the specific population of art and design undergraduates in China.

Internationally, studies offer some initial insights, though often in different contexts or populations. Some research suggests a positive association, where opportunities to engage in creative tasks and environments supportive of creativity are linked to higher levels of student engagement and satisfaction (Amabile & Pillemer, 2000; Hennessey & Amabile, 2010). For example, studies in general higher education settings have found that teaching methods that encourage active learning and critical thinking, which are related to creative processes, can also improve student satisfaction (Palmer & Holt, 2000). Research on creative self-efficacy – a student's belief in their own ability to be creative – has also shown positive correlations with academic motivation and engagement, elements closely tied to satisfaction (Tierney & Farmer, 2011). However, other studies highlight complexities; for instance, environments that push for radical creativity might also involve higher levels of critique and potential failure, which could negatively impact satisfaction for some students (Zhou, 2018). The measurement of creativity and satisfaction also varies widely, making direct comparisons challenging across studies.

Within China, direct empirical research specifically investigating the relationship between creative thinking abilities (or their development) and academic satisfaction among art and design undergraduates appears to be significantly limited. While studies exist on promoting creativity in Chinese HE (Li & Zhang, 2019) and on academic satisfaction among Chinese university students (Chen, 2021), few, if any, studies directly measure both constructs within this specific population and analyze their correlation or interaction. Research in China has explored factors influencing creativity (e.g., teaching methods, personality - Wang, 2020) and factors influencing academic satisfaction (e.g., resources, teacher-student interaction - Zhao & Liu, 2018), but the link between the two seems under-explored. For instance, studies might show that a particular teaching method improves creativity, and separate studies might show that the same teaching method improves satisfaction, but research connecting the improvement in creativity itself to the change in satisfaction level in the Chinese Art & Design context is sparse. This suggests a significant research gap regarding the direct association and potential mechanisms (e.g., mediation by creative self-efficacy, moderation by environmental support) linking creative thinking to academic satisfaction in this specific group.

In summary, research on the two core concepts exists, with specific insights into cultivation methods and cultural constraints for creativity in Chinese Art & Design, and identified factors influencing satisfaction in Chinese HE, including specific points for Art & Design students. However, there is a clear lack of direct, empirical studies specifically examining the relationship between creative thinking and academic satisfaction among Chinese art and design undergraduates. Existing international research provides some theoretical basis and indirect evidence for a potential link, often mediated by environmental or motivational factors, but these findings may not be directly generalizable to the unique Chinese educational and cultural context without specific

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investigation. The current body of research offers commonalities in identifying influential factors for each construct separately but shows a significant divergence and a critical void when seeking studies that explicitly connect creative thinking development or ability to students' academic satisfaction in the target population. Theoretical links (e.g., via SDT or Social Cognitive Theory, as discussed in Section II) suggest a relationship should exist, but empirical evidence to support or refute this, and to understand its nature, is largely missing in the Chinese Art & Design higher education context.

IV. RESEARCH GAPS AND LIMITATIONS

Based on the synthesis of existing literature presented in Section III, it becomes evident that despite the recognized importance of both creative thinking and academic satisfaction in higher education, particularly within creative disciplines, there are significant gaps and limitations in the current body of research concerning their relationship among undergraduate students majoring in art and design in China. These limitations hinder a comprehensive understanding of this dynamic and impede the development of targeted educational strategies. The primary gaps identified relate to the lack of focus on the specific population, limitations in methodological approaches employed in existing studies, and the insufficient exploration of cultural dimensions.

The most prominent research gap is the lack of focused attention on the specific population of Chinese undergraduate students in art and design. While Section III highlighted research on creative thinking cultivation in art and design (Smith & Jones, 2018; Cross, 2011) and studies on academic satisfaction in Chinese higher education (Chen, 2021; Zhao & Liu, 2018), studies that specifically investigate the intersection of these two constructs within this precise demographic are notably scarce or non-existent. General studies on student satisfaction in China may not adequately capture the unique experiences and priorities of art and design majors, whose satisfaction might be disproportionately influenced by factors like studio conditions, critique processes, and the subjective nature of their coursework (Sun & Jiang, 2022; Li & Chen, 2023). Similarly, research on creativity in broader educational or psychological contexts (Amabile, 1996; Sternberg & Lubart, 1991) or even in Chinese higher education generally (Li & Zhang, 2019) may not fully account for how creative thinking is developed, perceived, or relates to satisfaction within the specialized studio environment and pedagogical traditions of art and design programs.

The Art and Design discipline presents a unique academic context characterized by a blend of structured skill acquisition and highly unstructured creative exploration, often involving intense personal investment in projects and public critique (Sullivan, 2010). Undergraduate students in this field are also at a crucial developmental stage, navigating the complexities of creative identity formation alongside the demands of higher education (Barnett & Coate, 2005). The Chinese context adds further layers of complexity, including the influence of specific cultural values, the exam-oriented background of students entering university, the evolving job market for creative professionals, and institutional variations (Zhou, 2019; Wu & Zhao, 2022). Research on student outcomes in other disciplines (e.g., engineering, business) or in different national contexts, while providing valuable theoretical insights, cannot be directly generalized to understand the specific interplay between creative thinking development and academic satisfaction for this particular group of students navigating these unique disciplinary, developmental, and contextual factors simultaneously. Without studies specifically targeting Chinese art and design undergraduates, educators and policymakers in China lack empirical evidence tailored to their students' experiences, making it challenging to design effective interventions or curricula aimed at simultaneously fostering creativity and enhancing academic satisfaction. The absence of this focused research represents a critical void in the literature, limiting the applicability and relevance of existing findings to the specific needs of this significant student population.

The existing research often suffers from limitations in methodological approaches, primarily the prevalence of cross-sectional survey designs. Much of the research on student satisfaction and factors influencing creativity relies on data collected at a single point in time (e.g., Chen, 2021; Zhao & Liu, 2018). While cross-sectional studies are valuable for identifying correlations and describing the state of affairs at a given moment, they are inherently limited in their ability to establish causality or capture the dynamic nature of the relationship between creative thinking and academic satisfaction. The relationship between these two constructs is likely not static; a student's creative thinking skills may develop over time (Runco, 2004), and their academic satisfaction can fluctuate

based on various experiences throughout their degree program (Elliott & Shin, 2002). A cross-sectional study might reveal a correlation between a student's current level of perceived creativity and their current satisfaction, but it cannot determine whether enhanced creativity leads to greater satisfaction, or if higher satisfaction provides a more conducive environment for creativity to flourish, or if there is a complex reciprocal relationship.

The lack of longitudinal tracking in studies makes it difficult to observe how changes in creative thinking abilities over the course of an undergraduate program relate to changes in academic satisfaction. For example, does participation in specific creativity-boosting workshops in the second year lead to both improved creative outcomes and sustained or increased satisfaction in the third and fourth years? Conversely, does a period of low satisfaction, perhaps due to challenging critiques or heavy workload, negatively impact a student's creative output or confidence over time? Longitudinal research is essential to uncover these temporal dynamics and potential causal pathways (Duncan et al., 2003). Similarly, the absence of experimental or quasi-experimental designs limits the ability to draw causal inferences. While challenging to implement in real-world educational settings, intervention studies that manipulate specific variables (e.g., implementing a new creativity-focused teaching method in one group while maintaining a control group) and measure the impact on both creative thinking and academic satisfaction are crucial for understanding cause-and-effect relationships and informing evidence-based pedagogical practices (Shadish, Cook, & Campbell, 2002). The reliance on correlational designs means that while we might identify potential associations, we cannot definitively conclude that fostering creativity will cause an increase in satisfaction, or vice versa, which is a significant limitation for developing actionable recommendations.

Tthere is a discernible neglect of the cultural dimension in existing discussions about creative expression and academic satisfaction, particularly concerning their interaction in the Chinese context. As highlighted in Section I and III, Chinese culture and the specific structure of its educational system introduce factors that may significantly influence how creativity is expressed, perceived, and valued, as well as what contributes to students' academic satisfaction (Zhou, 2019; Wu & Zhao, 2022). Concepts such as collectivism versus individualism, the impact of face-saving behaviors, the balance between respecting tradition and pursuing innovation, the influence of parental expectations on career choices (including pursuing creative fields), and the specific dynamics of teacher-student relationships and peer interaction within a Chinese cultural framework, all potentially play a role in how creative thinking is developed and how students experience satisfaction with their studies (Wang, 2021).

Existing research rarely delves deeply into how these specific cultural nuances mediate or moderate the relationship between creative thinking and academic satisfaction. For example, how does the cultural emphasis on foundational skills training in early art education influence a student's later willingness to engage in highly experimental, potentially "risky" creative projects at university, and how does that willingness (or lack thereof) relate to their satisfaction? How does the way critique is delivered and received, shaped by cultural norms around authority and public evaluation, affect both students' creative confidence (related to creative thinking) and their satisfaction with their courses or faculty? Research has not adequately explored how these deeply ingrained cultural factors might influence the link, for instance, between creative self-efficacy and satisfaction, or between receiving creative feedback and feeling satisfied with academic progress. The predominant use of instruments developed in Western contexts, without rigorous cultural adaptation and validation, might also fail to capture the full spectrum of experiences and perceptions relevant to Chinese students (Cheung & Leung, 2007). Overlooking the cultural dimension means that any identified relationships may be superficial, potentially misinterpreting the underlying processes and hindering the development of culturally appropriate pedagogical interventions aimed at fostering creativity and enhancing satisfaction among Chinese art and design students. A deeper qualitative or culturally sensitive quantitative exploration is needed to understand the lived experiences of these students within their specific cultural context and how it shapes the interaction between their creative journey and their academic fulfillment.

In conclusion, the existing literature provides foundational knowledge about creative thinking and academic satisfaction separately, with some insights into the Chinese art and design context for each. However, a significant research void exists regarding the direct relationship between these two constructs within this specific population. The prevailing reliance on cross-sectional designs limits our understanding of causality and dynamic changes over time, while the critical influence of

Chinese cultural factors on this potential relationship remains largely unexplored. These interconnected gaps highlight the urgent need for future research specifically targeting Chinese art and design undergraduates using robust methodologies that can investigate causal links and incorporate cultural nuances.

V. FUTURE RESEARCH DIRECTIONS

Based on the identified research gaps and limitations within the existing literature, particularly concerning the relationship between creative thinking and academic satisfaction among undergraduate students majoring in art and design in China, several crucial avenues for future research emerge. Addressing these gaps is essential to advance both theoretical understanding and practical application in enhancing art and design education in this specific context.

First and foremost, future research should directly explore the correlation or causal relationship between creative thinking and academic satisfaction within the target population of Chinese art and design undergraduates. As highlighted in Section IV, there is a significant lack of empirical studies explicitly examining this link (Chen, 2021; Li & Zhang, 2019). Moving beyond simple cross-sectional correlational studies, future work should employ methodologies capable of investigating causality and dynamic changes over time. This includes conducting longitudinal studies that track students' creative development and satisfaction levels throughout their four years of undergraduate study, observing how these constructs evolve and influence each other. Furthermore, experimental or quasi-experimental designs could be valuable, for example, by implementing specific creativity-fostering interventions (e.g., novel pedagogies, dedicated workshops) within art and design programs and assessing their causal impact on both students' creative thinking outcomes and their reported academic satisfaction compared to control groups (Shadish, Cook, & Campbell, 2002). Such studies would provide much-needed evidence on the directionality of the relationship and the effectiveness of interventions.

Secondly, future research should include mediating variables, such as self-efficacy, to explore the underlying mechanisms of the relationship between creative thinking and academic satisfaction. As discussed in Section II, theories like Social Cognitive Theory suggest that self-efficacy plays a key role in linking personal attributes and environmental factors to behavior and outcomes (Bandura, 1986). It is plausible that fostering creative thinking increases students' creative self-efficacy (their belief in their own creative abilities), which in turn positively impacts their engagement and satisfaction with their academic work (Tierney & Farmer, 2011). Future studies should test such mediation hypotheses empirically, for example, using mediation analysis in survey data or exploring changes in self-efficacy as mediators in longitudinal studies. Other potential mediating variables derived from the literature review, such as intrinsic motivation, perceived autonomy support from faculty, quality of feedback received (Li & Chen, 2023), or a sense of belonging within the art and design community, should also be investigated. Exploring these mediators will help uncover how creative thinking or creative experiences influence satisfaction, providing a more nuanced understanding of the relationship and pinpointing specific leverage points for educational intervention. Furthermore, future research should explicitly strive to incorporate the unique cultural dimensions discussed in Section IV, investigating how cultural values, expectations, and the specific characteristics of the Chinese educational environment might moderate or mediate the relationships between creative thinking, mediating factors, and academic satisfaction (Wu & Zhao, 2022).

VI. CONCLUSION

This literature review set out to synthesize existing knowledge regarding the relationship between creative thinking and academic satisfaction, particularly within the context of undergraduate students in art and design in China. While acknowledging the theoretical interconnectedness of these constructs and drawing insights from broader educational and psychological research, the review ultimately reveals a significant void in the empirical literature directly addressing this specific relationship within the stated population and context.

A central finding of this review is the critical limitation of current research when focusing on Chinese undergraduate students in art and design. Empirical studies specifically examining the relationship between creative thinking and academic satisfaction within this precise demographic are notably scarce. Existing literature tends to address creative thinking cultivation and academic satisfaction as separate areas, with research on the latter often focusing on general student populations in China rather than the unique experiences of art and design majors. Furthermore, the methodologies employed in much of the existing research, including prevalence of cross-sectional designs, limit the ability to establish causal links or

understand the dynamic nature of how creativity and satisfaction might influence each other over time. Crucially, the potential influence of unique Chinese cultural factors—such as the balance between tradition and innovation, the impact of societal expectations, and the dynamics of authority and feedback within a specific cultural framework—on the interplay between creative thinking and academic satisfaction remains largely unexplored. These limitations mean that current understanding is fragmented and lacks context-specific empirical validation.

Despite these limitations in the existing literature, this review holds significant value and offers crucial insights for art and design educational practice, curriculum reform, and student development support policies. By synthesizing related bodies of research and clearly articulating the specific gaps concerning the target population, methodology, and cultural context, the review underscores the pressing need for focused empirical investigation. The identification of this research void is not merely an academic observation but serves as a direct call to action for researchers. Filling these gaps is essential for developing evidence-based strategies tailored to the specific needs and experiences of Chinese art and design students. Understanding how fostering creative thinking directly or indirectly impacts their academic satisfaction, and how this relationship is shaped by the unique Chinese educational and cultural environment, can inform how curricula are designed, how teaching and critique are delivered, and how support systems are implemented to enhance both creative development and student well-being. Ultimately, the insights gleaned from future targeted research, guided by the limitations highlighted here, will be vital for optimizing the educational experience and supporting the holistic growth of art and design undergraduates in China.

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