

Research Article

Reform of Graduation Project Teaching in Fashion and Apparel Design Major Under Emerging Industry Trends

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Abstract

The evolving landscape of fashion education necessitates pedagogical frameworks that align with dynamic industry demands. Current talent cultivation models in Fashion and Apparel Design often exhibit disconnects between academic training and professional realities, particularly in addressing market segmentation, cultural sustainability, and technological advancements. Graduation design projects, as critical indicators of students' career readiness, increasingly require systematic reforms to bridge these gaps. This study aims to formulate curriculum development strategies by analyzing alumni career trajectories and graduation design trends, with the goal of enhancing the industry relevance and academic rigor of fashion education. Four strategic directions are identified: Industry-education integration through collaborative mentorship models, ensuring real-world problem-solving competencies; Experimental innovation curricula addressing emerging domains like virtual fashion design and digital prototyping; Cultural heritage preservation modules fostering localized design narratives within globalized markets; Adaptive training frameworks for independent designer brand development. The reform implements a segmented guidance system utilizing multidisciplinary faculty teams to monitor critical milestones across design ideation, technical execution, and market positioning phases. A dual-axis evaluation framework is established, combining standardized competency metrics, technical proficiency, market analysis with differentiated assessment criteria for innovation-driven projects. By synchronizing curriculum architecture with industry evolution patterns-particularly the growth of niche markets and demand for culturally contextualized design - this pedagogical model demonstrates enhanced capacity for student career preparedness. The study contributes actionable insights for aligning fashion education with contemporary industry paradigms while maintaining academic integrity, proposing scalable applications for global design education systems facing similar transitional challenges.

Keywords

Industry, Education, Industry, Innovation, Heritage, Virtual Fashion Design, Graduation Project

1. Introduction

The graduation project in Fashion and Apparel Design represents the culminating component of undergraduate education, serving as both a comprehensive demonstration of students' professional competencies and a critical transition from theoretical knowledge to practical application. As

Confucius aptly stated, "Learning without thought is labor lost; thought without learning is perilous," underscoring the fundamental importance of integrating practical implementation and experiential learning within the educational paradigm. This pedagogical component not only functions as a

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pivotal element of instructional practice but also provides a significant platform for students to exhibit their academic achievements and demonstrate profound conceptual understanding through applied research.

From an educational assessment perspective, the graduation project serves as a dual indicator: it not only evaluates the effective implementation of the curriculum but also functions as a comprehensive assessment mechanism for students' multidimensional capabilities. The conceptual framework and pedagogical approach to "fashion and apparel design" have undergone significant evolution in response to temporal developments, with each era's educational philosophy profoundly influencing contemporary designers' interpretation of design principles and the concomitant evolution of consumer paradigms.

The progression of fashion design education maintains a dynamic relationship with shifting industry demands and evolving consumer psychology. Current industrial developments have necessitated substantial modifications in professional curriculum development and talent cultivation strategies. Given that graduation projects directly interface with industry trends, a thorough comprehension of emerging industrial paradigms forms the essential foundation for reforming pedagogical approaches in fashion design education [1]. This alignment ensures the continued relevance and efficacy of academic programs in meeting contemporary professional requirements.

2. Transformative Industry Trends: Evolving Requirements for Fashion Design Graduation Projects

The evolution of fashion design education has been closely aligned with industrial demands and dynamic shifts in consumer psychology. Current transformative developments within the apparel sector have introduced new and urgent requirements for professional education frameworks and talent development criteria. A comprehensive understanding of emerging industry trajectories has consequently become an essential foundation for advancing pedagogical reforms in apparel-related disciplines. [2]

2.1. Transformative Industry Trends 1: New Demand for Talent Cultivation Under the Orientation of Professional Segmentation

Recent years have witnessed a substantial intensification of the agglomeration effect within the fashion industry, characterized by the proliferation of industrial clusters that have facilitated optimal resource allocation and enhanced systemic integration across the value chain. This phenomenon has catalyzed comprehensive industrial upgrading, extending both the depth and breadth of sectoral development. Concurrently, the fashion brand market has exhibited in-

creasingly pronounced segmentation characteristics, manifesting not only through precise differentiation in product positioning and stylistic orientation but also through sophisticated stratification of target consumer demographics and consumption scenarios. These evolutionary trajectories have precipitated a paradigm shift in professional talent requirements, transitioning from generalized competencies to specialized, targeted and diversified skill sets that align with the industry's refined operational demands.

The progressive intensification of market segmentation has fundamentally transformed the paradigm of apparel design and production, shifting from generalized, large-scale operational models toward specialized, niche-oriented approaches characterized by precision and differentiation. This structural evolution necessitates corresponding strategic adaptations in fashion design education to maintain alignment with contemporary industry requirements.

From a curricular perspective, academic programs must establish stronger correspondence with specialized market segments through the development of focused disciplinary trajectories. [3, 4] This involves both vertical intensification of technical expertise and horizontal expansion of interdisciplinary integration across domains such as haute couture, athletic leisurewear and intelligent wearable technologies.

Concurrently, pedagogical frameworks require systematic innovation, particularly in instructional methodologies and assessment paradigms. Emphasis should be placed on cultivating:

- (1) advanced creative cognition and innovative thinking capacities,
- (2) cross-disciplinary collaborative competencies,
- (3) adaptive responsiveness to dynamic market fluctuations.

These educational objectives are essential for addressing the diversified talent requirements emerging from the contemporary apparel industry's heterogeneous business ecosystem.

2.2. Transformative Industry Trends 2: Fostering Independent Designers with International Competence

The structural transformation of China's apparel industry, marked by market segmentation, supply chain optimization, and the maturation of buyer-driven systems, has significantly elevated the commercial and cultural value of independent designer brands. This shift is underscored by a 27% annual growth rate in the independent designer brand sector from 2020 to 2023, reflecting evolving consumer preferences for personalized and culturally resonant designs.

An investigation was conducted on the current employment status of 300 Fashion and Apparel Design graduates (2020-2024 cohort) from our institution. The data indicates that 4.8% of post-00s graduates have successfully launched

independent brands within two years of graduation, leveraging digital platforms and multi-channel distribution strategies. Notably, 12.3% of respondents expressed concrete plans to establish proprietary brands within five years, representing a 35% increase compared to the pre-2018 cohort. These designers prioritize creative autonomy (78% of respondents) and brand identity development (65%) over traditional employment metrics such as enterprise scale or salary levels.

The study further identifies three key characteristics of this new generation of designers:

- (1) Early-stage brand incubation during academic training, with 22% of graduates initiating brand concepts through graduation design projects;
- (2) Strong digital fluency, with 85% utilizing social media and e-commerce platforms for brand promotion;
- (3) Enhanced international orientation, evidenced by a 40% increase in participation rates at international design competitions compared to previous cohorts.

The globalization of China's apparel industry further amplifies these trends. Data from the China Fashion Association (2023) shows a 31% annual growth in Chinese designers' participation at major international fashion weeks, while

domestic brands' overseas revenue increased by 18% year-on-year. This bidirectional internationalization necessitates a paradigm shift in fashion education, particularly in developing cross-cultural design competencies and global market literacy.

To address these transformative trends, our analysis proposes a tripartite educational framework:

- (1) Integration of brand development modules into core curricula, focusing on entrepreneurial skills and digital marketing;
- (2) Establishment of international collaboration platforms, facilitating cross-cultural design exchanges and global exposure;
- (3) Implementation of mentorship programs connecting students with successful independent designers, with pilot programs demonstrating a 25% improvement in graduate brand establishment rates.

These findings underscore the urgent need for fashion education systems to realign curricular objectives and pedagogical approaches, ensuring graduates are equipped to navigate the complexities of an increasingly globalized and brand-driven industry landscape.

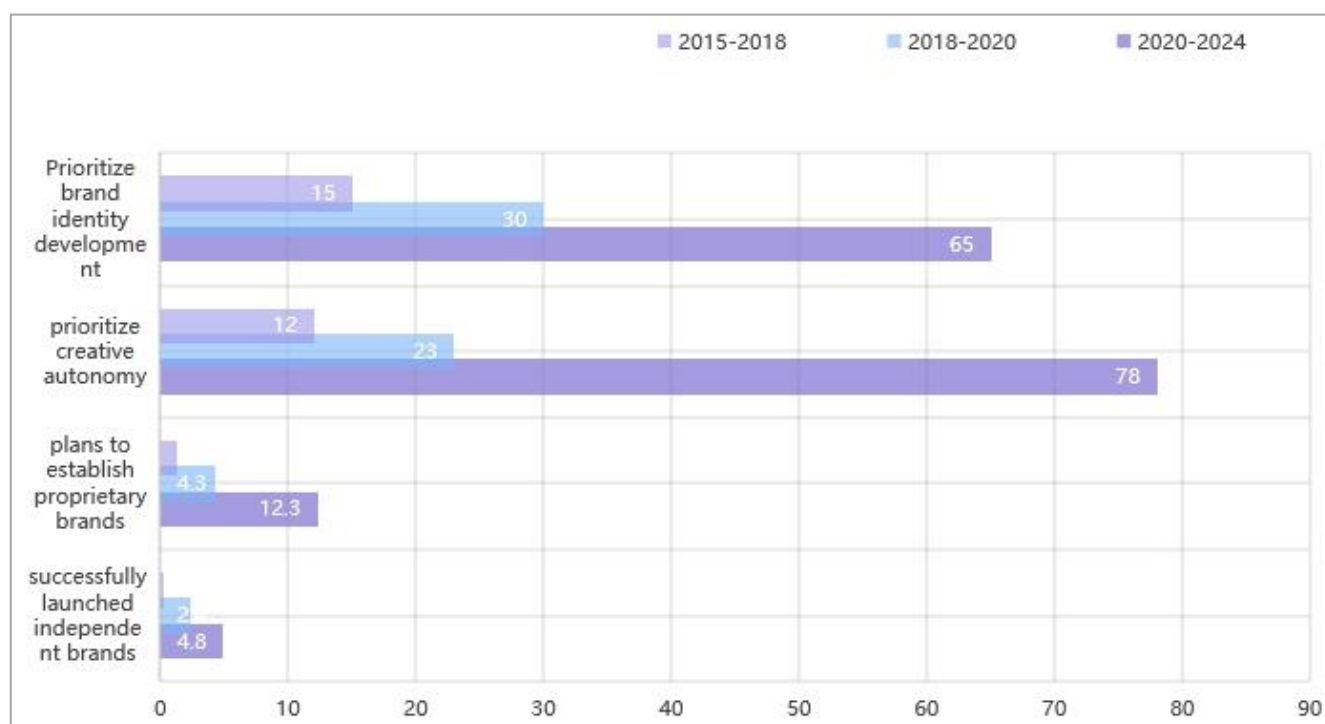


Figure 1. Survey on Graduates' Preference for Independent Brands.

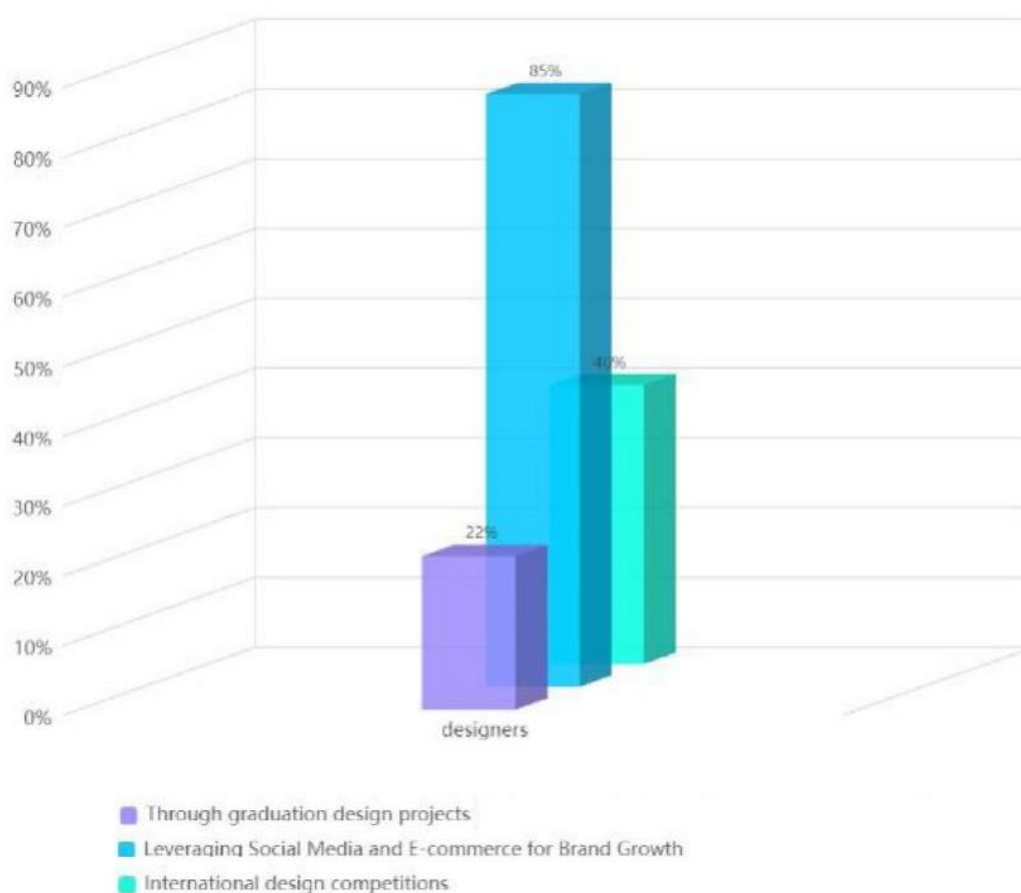


Figure 2. Key characteristics of designers.

2.3. Transformative Industry Trends 3: Emerging Imperatives in Course Outcome Evaluation

Graduation design projects represent more than terminal exhibition outcomes; they constitute a comprehensive mapping of pedagogical systems and curricular planning. Recent years have witnessed the emergence of platforms such as "International Fashion Week" and "Student Fashion Week," which have significantly facilitated the exhibition of academic achievements and fostered industry-academia exchange across domestic fashion institutions. [5] However, the proliferation of such showcase events has revealed critical gaps in the systematic evaluation of educational outcomes, necessitating the development of robust assessment methodologies.

Firstly, the dissemination of academic outcomes should extend beyond the confines of the campus, actively seeking opportunities to showcase on public art platforms. This approach not only broadens students' horizons and subjects their works to broader scrutiny and critique but also significantly enhances their self-confidence and creative passion. By leveraging public art platforms, young designers and their conceptual designs can be elevated to a wider audience, garnering

diverse evaluations from both the general public and art institutions. This open evaluation model is instrumental in fostering innovation and advancement in fashion design education.

Secondly, integrating industrial and market evaluations into the core framework of the assessment system represents a significant innovation over traditional evaluation methodologies. Conventional evaluation systems predominantly rely on the judgments of academic instructors, often overlooking the perspectives of society and the market. By incorporating industry and market stakeholders as integral components of the evaluation process, the assessment outcomes can more accurately reflect market demands and contemporary aesthetic trends. This approach facilitates the cultivation of fashion designers who are better aligned with the evolving requirements of the industry. Furthermore, this evaluation paradigm can stimulate students' creative inspiration, encouraging the development of works that are more closely attuned to real-world applications, thereby enhancing their practicality and market competitiveness.

Furthermore, integrating enterprise demands into the professional teaching framework and engaging industry experts as mentors in the educational process are essential components of constructing a diversified evaluation system. Collaboration between academic institutions and enterprises not

only provides students with enhanced practical opportunities and career pathways but also ensures that the curriculum aligns more closely with market needs, thereby improving students' professional competence and practical skills. Establishing a joint evaluation system involving both academic and industry stakeholders can yield more objective and impartial assessment outcomes, contributing to the sustainable and healthy development of fashion design education.

3. Key Challenges in Apparel Design Graduation Projects Amid Industry Trends

Compared to other design disciplines, apparel design places a heightened emphasis on the practical implementation of industry-education integration. Guided by employment-oriented strategies, the emerging model of industry-teaching integration has emerged as a pivotal approach for higher education institutions to consolidate advantageous resources, bolster scientific research, and delineate their academic positioning and objectives. In the context of an increasingly challenging employment landscape, the pedagogy of apparel graduation design must acknowledge the critical role of market demand in shaping students' career trajectories. It is imperative to forge a robust linkage between graduation design projects and market requirements. Adapting teaching methodologies in alignment with industry trends enables students to gain a comprehensive understanding of market dynamics and make timely, appropriate adjustments.

Drawing upon the empirical evidence from eight iterations of graduation design projects conducted over the eleven years since the inception of our college's Apparel and Fashion Design program, three salient issues have been identified, as summarized below:

3.1. Graduation Design Topics: Disconnected from Emerging Industry Trends and Market Demands

The evolving industry landscape has introduced new demands for designers, including the need for specialized, composite, and original designers. Consequently, these shifts have imposed fresh requirements on the practical competencies of designers. In response to the diverse needs of the industry, students aspiring to pursue careers as specialized designers are encouraged to select topics aligned with industry-education integration, producing graduation designs that emphasize ready-to-wear sensibilities. [6, 7] Conversely, those inclined toward roles as original designers may opt for projects that prioritize experimental and creative approaches in apparel design. By aligning graduation design topics with industrial demands and students' career intentions during the initial streaming phase, the graduation design process serves as a critical platform for

students to gain a deeper understanding of the industry and the practical requirements of enterprises. This approach not only bridges the gap between academic training and industry expectations but also equips students with the skills and insights necessary to meet the dynamic needs of the contemporary design landscape.

In recent years, the creative autonomy of students within this program has demonstrated a marked increase, accompanied by a notable expansion in the flexibility and diversity of topic selection for apparel graduation design projects. Students are empowered to independently select their graduation design themes, drawing upon the foundational knowledge acquired from prerequisite module courses and aligning with their individual design preferences. This approach undoubtedly fosters a broad and conducive environment for creative exploration and innovation. However, while this highly flexible topic selection framework enhances student autonomy, it simultaneously introduces certain challenges that warrant careful consideration. These challenges may include the potential misalignment between student-selected topics and industry demands, as well as the need for structured guidance to ensure the academic rigor and practical relevance of the projects.

Specifically, the tendency of students to prioritize personal interests and creative expression during topic selection often leads to the relative neglect of market demand as a critical factor. This oversight undermines the practical impact and applicability of their graduation design projects. Current observations indicate that students generally exhibit insufficient market awareness, with limited understanding of the latest trends in the apparel industry and the nuanced demands of the market. Consequently, they frequently struggle to incorporate market-driven considerations into their topic selection process, resulting in designs that may lack relevance to real-world industry needs. This gap highlights the necessity for enhanced guidance and training to bridge the divide between creative exploration and market-oriented design practices.

This phenomenon of neglecting market demand underscores a discernible disjunction between the thematic focus of apparel graduation designs and the prevailing market requirements within the contemporary industry landscape. On one hand, student design projects often exhibit an excessive avant-garde orientation or a deviation from mainstream market trends, thereby limiting their potential for market recognition and consumer acceptance. Conversely, design concepts with substantial market potential may remain underdeveloped and inadequately presented due to students' insufficient attention to market dynamics. Consequently, the critical challenge lies in reconciling the imperative of preserving students' creative autonomy with the necessity of guiding them to more effectively align their designs with market demands. This issue has emerged as a pressing concern that necessitates immediate resolution in the context of selecting apparel graduation design topics.

3.2. Deficiencies in Mid-Process Supervision Norms for Graduation Projects under Advisor Accountability System

The current graduation design framework under the mentor responsibility system exhibits significant deficiencies in process management protocols. The established timeline commences with mentor selection in the second semester of the third academic year, followed by the preliminary defense post-winter vacation in the first semester of the fourth year, culminating in the final defense and graduation exhibition by May's end. While this pedagogical structure allocates sufficient duration for topic selection, it disproportionately compresses the timeframe for both the graduation exhibition and the preparation of design documentation, thereby compromising the quality of final presentations.

A critical systemic limitation emerges in the pre-commencement phase, where oversight of students' design progress remains exclusively within the purview of individual mentors, precluding comprehensive monitoring by the broader instructional team. This structural constraint frequently results in suboptimal project advancement from initiation through interim evaluations, manifesting a distinct pattern of "bipolar compression and medial relaxation" in the graduation design process.

In the context of graduation design processes, while theoretical frameworks emphasize the importance of ensuring design quality through rational time management, structured tutoring plans, and comprehensive team-based supervision, practical implementation often reveals significant deficiencies in intermediate process management. [7] Particularly under the tutor responsibility system, the normative frameworks governing the mid-term supervision and quality control mechanisms of graduation design projects frequently demonstrate substantial gaps and inconsistencies.

In the initial phase of inspiration generation and creative conceptualization, while tutors may offer some directional guidance, the absence of standardized process management protocols frequently results in students experiencing disorientation or initial inertia. This critical stage, characterized by insufficient systematic guidance and support, often leads to deviations or stagnation in the development of creative inspiration. Subsequently, during the creative expansion and realization phase, the lack of explicit process monitoring presents significant challenges. Students frequently encounter various technical or implementation obstacles when translating creative concepts into concrete design solutions. These challenges often remain unresolved in a timely and effective manner, adversely affecting both the progress and quality of the design outcomes. Following the project initiation and defense stages, the focus should ideally shift to the realization of design solutions and the control of target contours, which constitute crucial components of process management. However, in practice, tutors may not be able to provide comprehensive tracking and guidance for each stu-

dent's design solution. This limitation frequently results in deviations during the implementation of design schemes and target contours, often necessitating multiple revisions and adjustments. Consequently, this increases unnecessary workload and temporal costs, ultimately compromising the efficiency and quality of the design process.

The absence of standardized intermediate process management protocols within the tutor responsibility system for graduation design constitutes a critical issue that requires immediate resolution. To enhance the quality and efficiency of graduation design outcomes, it is imperative to establish a more comprehensive process management framework. This framework should delineate specific tasks and objectives for each phase, reinforce the tutor's role in providing consistent guidance and supervision, and ensure the provision of necessary support and resources throughout the design process. Such measures are essential for optimizing the overall effectiveness and academic rigor of graduation design projects.

3.3. The Evaluation System of Graduation Design Is Relatively Homogenous

The evaluation framework for undergraduate graduation design in this program primarily comprises two components: the graduation design report and the graduation design runway show. The runway show format enables public evaluation of the design works, with some exceptional pieces garnering attention from industry stakeholders and leading to collaborative opportunities. However, the current assessment system is characterized by several limitations, including a narrow range of evaluators and inflexible evaluation methodologies. Consequently, students often struggle to obtain intuitive, immediate, and actionable feedback. This situation fosters a mindset where achieving a high score and smooth graduation becomes the primary objective, rather than critically assessing whether the supporting materials and methodologies employed in the design process accurately reflect current industry practices. This gap in the evaluation process undermines the program's ability to fully prepare students for real-world design challenges.

The diversified demands of talent cultivation necessitate the differentiated construction of graduation design requirements and processes, which, in turn, calls for the development of tailored evaluation mechanisms. Currently, our institution exhibits a tendency toward "homogenization" in the evaluation criteria for graduation design works. Specifically, some tutors prioritize the "feasibility of ready-to-wear" as the central criterion, emphasizing the production of market-ready garments with high commercial viability. In contrast, others adopt "innovation" as the dominant criterion, encouraging students to engage in experimental and artistic exploration.

Furthermore, while certain graduation design projects attempt to incorporate industry professionals into the evaluation process to enhance practice-oriented assessment, the

majority of evaluations remain reliant on university faculty serving as jury members. This approach presents limitations, as the diversity of professional backgrounds among evaluators often leads to divergent perspectives on the same work. Such discrepancies undermine the objectivity and comprehensiveness of the evaluation process, ultimately compromising the scientific rigor and fairness of the assessment system.

The divergence in design orientation fundamentally dictates distinct requirements for graduation design creation and necessitates differentiated evaluation criteria. The implementation of such tailored evaluation mechanisms is directly manifested in the assessment outcomes of graduation design projects. Both the ready-to-wear group and the creative group must address several common criteria, including the clarity of the design theme, the level of innovation, the fashion-forward nature and completeness of the work, the aesthetic quality of the design, the appropriateness of color and material selection, the structural coherence of the layout, and the rationality of detailing in the design process. However, the emphasis placed on these criteria varies significantly between the two groups.

For the ready-to-wear group, additional considerations such as market acceptance and client-specific feedback are integral to the evaluation process. These factors are incorporated into a secondary layer of scoring, reflecting the commercial viability and practical relevance of the designs. This dual-layered evaluation approach ensures that the assessment framework aligns with the distinct objectives and professional expectations of each design orientation, thereby enhancing the relevance and applicability of the evaluation results.

4. Reform Strategies for Fashion Design Graduation Projects in Response to Emerging Industry Trends

In recent years, the centralized development of apparel industry clusters has facilitated the agglomeration of industrial resources, while the industry chain is confronted with the imperative for deepening and upgrading. Concurrently, the apparel brand market is exhibiting a pronounced trend toward segmentation, resulting in more targeted demands for specialized talent. In response to industry trends such as the increasing segmentation of apparel commodity categories, the emergence of independent designer brands, and the growing emphasis on cultural design within the apparel sector, this study proposes a reform of graduation design practices. The reform is anchored in three strategic directions: industry-education integration, experimental creativity, and cultural inheritance, serving as the foundational framework for aligning graduation design with industrial demands. To address the segmentation trend in the apparel industry, the reform emphasizes the integration of graduation design with

specific industrial needs. This is achieved through the establishment of segmented guidance and critical node oversight by a multidisciplinary teaching team. The team is tasked with managing the graduation design process while standardizing a diversified evaluation system tailored to the distinct design orientations within the graduation design framework.

The proposed reform of the graduation design program in clothing and apparel design is specifically designed to address the evolving trends and structural adjustments within the apparel industry. It focuses on four key directions—experimental creativity, cultural heritage, industry-education integration, and virtual fashion—as pivotal entry points to align with contemporary industry trends. [8] This approach aims to enhance the relevance, innovation, and practical applicability of graduation design projects, ensuring they meet the dynamic demands of the modern apparel industry.

4.1. Integrating Graduation Project with Apparel Industry Segmentation Trends

In the initial two years of their academic program, students specializing in clothing and dress design undergo comprehensive study and training in foundational professional courses. This phase equips them with a robust understanding of clothing design theory, design methodologies, and garment production techniques. Upon advancing to the third year, students are presented with a selection of three specialized module courses: menswear, knitwear, and children's wear. To enhance the practical relevance of their education, various enterprises and brands are invited to participate in the graduation design process, thereby facilitating a targeted approach to employment. Companies with talent development initiatives are encouraged to release trend forecasts prior to project commencement, enabling students to engage in practical design tasks centered around brand development. These tasks encompass industry analysis, consumer research, brand strategy formulation, and product development, thereby fostering students' brand awareness and product development capabilities.

Throughout the graduation design process, instructors are tasked with staying abreast of the latest trends and developments within the global apparel industry. They are required to systematically implement a series of practical teaching activities, including in-depth industry analysis, detailed consumer group research, brand strategy planning, and product series development. These activities are meticulously designed to cultivate students' brand-building acumen and their ability to innovate in product development. Since the inception of this curriculum, several forward-thinking and market-savvy brand planning initiatives have been successfully developed. By taking into account the unique characteristics of the designer demographic and the distinct developmental trajectory of the apparel industry, and leveraging the policy support and extensive industrial resources available to the

institution, an innovative teaching model has been actively explored and implemented. This model integrates exemplary cases from the course with real-world commercial operations,

aiming to transform the creative and intellectual outputs of the course into viable commercial practices.

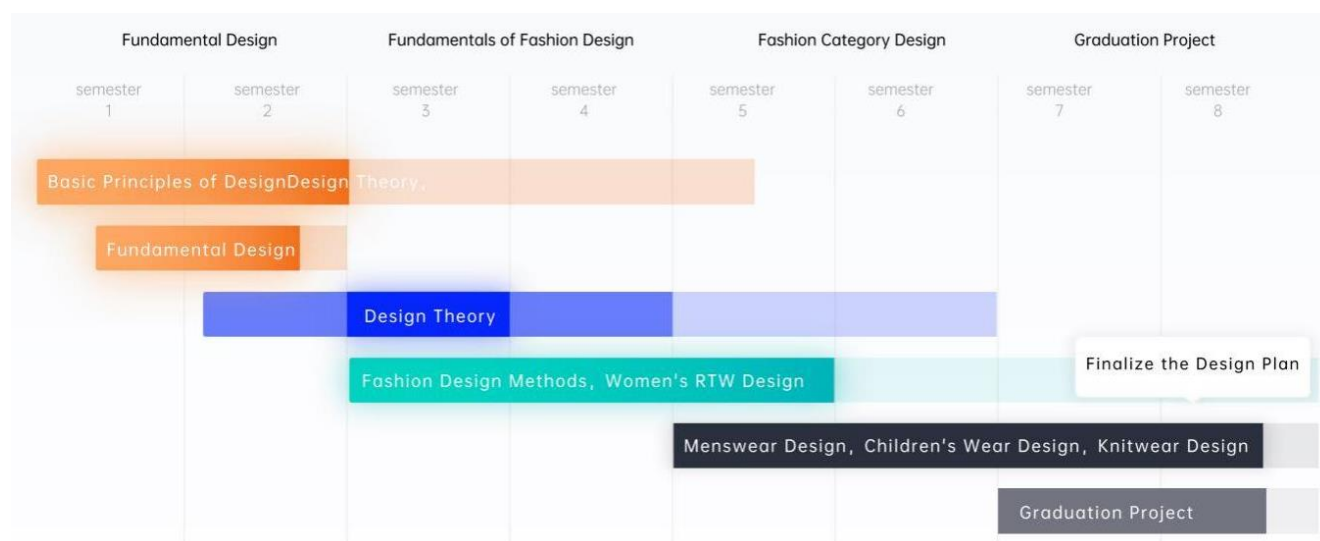


Figure 3. Integrating Apparel Industry Trends into Curriculum.

4.2. Faculty Team Tutoring and Critical Node Management in Graduation Project Process

The practical component of graduation design is a time-intensive process. To optimize this, a collaborative teaching team comprising academic faculty and industry mentors can be established, tailored to the specific content and timeline of the graduation design. This composite team provides segmented, in-depth guidance, thereby enhancing students' practical competencies. By integrating key node control throughout the graduation design timeline, the overall quality of practical outcomes is significantly improved.

The practical aspects of graduation design can be systematically divided into four critical phases, each addressing a distinct design challenge. The initial phase involves intensive mentoring to establish the direction of the graduation design. The intermediate phase leverages a dual-mentor system, combining academic and industry expertise, to deliver focused instruction and address queries. The final phase centers on the presentation of graduation design outcomes, with the overarching theme and impact of the final fashion week serving as the primary evaluative framework.

4.3. Diversified Evaluation System for Design-Oriented Graduation Projects

Among annual graduates, those who pursue further studies abroad, enroll in domestic postgraduate programs, or estab-

lish independent designer studios tend to prioritize experimental creativity as the primary mode of expression in their graduation designs. This approach serves to develop creative portfolios for applications to international institutions or as an initial exploration for their personal brands. Conversely, graduates aiming for design-oriented employment predominantly select influential fashion brands or those aligning with their personal design aesthetics, often emphasizing marketability in their design works. Consequently, the divergent needs of talent cultivation and the evolving dynamics of the market necessitate varying requirements for graduation design creation. This, in turn, underscores the importance of a differentiated evaluation mechanism, highlighting the need for a diversified and multi-dimensional assessment system to comprehensively evaluate these outputs.

5. Implementation Methods and Reform Pathways for Fashion Design Graduation Projects

The reform of graduation design pedagogy in fashion and apparel design is grounded in the evolving demands of the industry, the objectives of student competency development, and an analysis of the characteristics of the design cohort. Emerging trends in the industry necessitate updated requirements for talent cultivation. The post-00s student cohort places greater emphasis on the experiential and emotional aspects of the design process rather than purely technical or skill-based performance. This generation is adept at integrating personal life experiences, individual personality traits,

and collective generational influences into their designs through personalized design languages. Consequently, the reform of graduation design in this discipline should align with the unique characteristics of the post-00s student group and the progressive trends of the industry. This involves refining educational objectives and pedagogical approaches to better accommodate the segmented cultivation model required by industry specialization, achieved through the delineation of professional directions.

5.1. Graduation Design Direction: Industry Trends and Completed Work Analysis

Industrial advancements necessitate the integration of creativity throughout the entire design process, encompassing conception, implementation, display, and promotion. As the structure of the garment industry continues to evolve, driven by trends such as brand market segmentation and the diversification of occupational roles, there is an increasing demand for designers with specialized skill sets. Consequently, graduation design projects must align with these industry requirements and provide relevant feedback. By analyzing completed graduation design categories and the corresponding career trajectories of students, the proportion of ready-to-wear design versus stage costume design in past projects can be differentiated. This analysis informs the strategic planning of future graduation designs, ensuring alignment with the proportional representation of clothing categories, show arrangements, and series design.

In the current teaching practices of domestic fashion design graduation projects, preliminary research findings have been integrated to develop an innovation-driven, multi-dimensional teaching strategy. This approach aims to holistically enhance students' design potential, market adaptability, and innovative capabilities through four core themes: experimental creativity, cultural heritage, industry-education integration, and virtual fashion. These themes collectively foster a comprehensive and forward-thinking educational framework tailored to the dynamic needs of the fashion industry.

5.1.1. Experimenting with Creativity: Inspiring Design and Exploring Unknown Territories

Experimental creativity serves as the fundamental cornerstone of graduation design projects, fostering an environment that encourages students to transcend conventional paradigms and explore innovative design concepts and technical methodologies. Building upon prerequisite modular coursework, students strategically select appropriate apparel categories based on their individual interests and specialized competencies. Subsequently, under the mentorship of faculty teams, they integrate their personal selections with avant-garde design philosophies to conduct exploratory design practices. This pedagogical approach not only cultivates students' capacity for innovative thinking but also facilitates the diversification

of design language expression. The incorporation of experimental creativity culminates in graduation design works that exhibit distinctive artistic styles and unique personality characteristics, thereby contributing novel perspectives and innovative approaches to the fashion industry.

5.1.2. Cultural Heritage: Promoting National Culture and Giving New Meaning to the Times

Cultural heritage constitutes a pivotal dimension in graduation design. We advocate for students to engage in a profound exploration and respectful interpretation of traditional cultural essence, subsequently integrating these elements with contemporary aesthetics to create garments that embody both historical profundity and modern sophistication. Through collaborative corporate projects, students are afforded the opportunity to investigate the strategic incorporation of traditional cultural motifs into modern apparel design within authentic market contexts, thereby facilitating the innovative perpetuation of traditional culture. This pedagogical approach not only augments students' comprehension and appreciation of national cultural heritage but also elevates the cultural significance and market viability of their design outcomes.

5.1.3. Integration of Industry and Education: Deepening School-enterprise Cooperation and Promoting the Application of Learning to Practice

The integration of industry and academia serves as a fundamental approach to enhance the practical applicability of graduation design projects. We systematically incorporate enterprise-sponsored projects into the curriculum, enabling students to engage in the complete design process from conceptualization to product realization within authentic industrial contexts. Through strategic collaborations with industry partners, students acquire not only invaluable practical competencies but also develop a comprehensive understanding of market demands and industry trends. This facilitates the optimization of design solutions to improve both functional performance and market viability. Furthermore, the industry-academia collaboration establishes a professional platform for students to demonstrate their capabilities and establish industrial connections, thereby facilitating a seamless transition into their professional careers.

5.1.4. Virtual Clothing: Keeping up with Digital Trends and Expanding Design Boundaries

The rapid advancement of digital technologies has catalyzed the emergence of virtual fashion as a transformative trend within the apparel industry. The strategic incorporation of virtual garment design in graduation projects serves to cultivate students' technological adaptability and facilitate

their exploration of digital innovation in fashion design. Through the creation and presentation of virtual collections, students not only enhance their digital design competencies but also expand the conceptual boundaries of fashion, introducing novel visual experiences and interactive possibilities

to the industry. [9] As technological evolution continues, virtual fashion is anticipated to become an integral component of design education, injecting dynamic innovation into fashion pedagogy.









Theme	Experimenting with Creativity	Cultural heritage	Integration of industry and education	Virtual Clothing
Student Projects	 	 	 	 
Features	Inspiring Design	promoting national culture	deepening school-enterprise cooperation	Keeping up with Digital Trends
	Exploring Unknown Territories	innovative perpetuation of traditional culture	promoting the application of learning to practice	Expanding Design Boundaries
	personality characteristics			

Figure 4. Student works under four themes.

Through the systematic integration of four core pedagogical dimensions - experimental innovation, cultural heritage, industry-academia collaboration, and digital transformation - we have established a comprehensive and progressive framework for graduation design education. This framework not only elevates students' design proficiency and market relevance but also provides substantial intellectual capital and human resources to drive the innovative development of the fashion industry. In subsequent educational practices, we will continue to refine and implement this strategic approach, dedicating sustained efforts to cultivate a new generation of fashion professionals with global perspectives and innovative capacities.

5.2. Summarize Practical Experience and Develop a Unique Mentoring Program and Key Node Arrangement

Through a series of systematic pedagogical reforms, the graduation design curriculum for fashion majors has been strategically enhanced to incorporate substantial market applicability. We have established a comprehensive teaching framework that facilitates students' professional com-

petency development, expanded the scope of design content, and implemented a scientifically structured teaching methodology. This reform includes the implementation of differentiated approaches tailored to individual creative orientations. The initiative emphasizes strengthening the innovative capacity of faculty mentors, establishing standardized and scientifically rigorous design management protocols, and developing performance evaluation metrics that effectively measure students' professional growth. These measures ensure that students genuinely enhance their design proficiency through practical graduation projects, thereby preparing them for diverse roles within the fashion industry.

The instructional process commences with faculty members collaborating with students to establish comprehensive design parameters, encompassing design orientation, "commercial fashion" or "avant-garde creativity", thematic development, and market positioning. Based on group dynamics and individual capabilities, specific design objectives are formulated to ensure an optimal balance between challenge and achievability. Subsequently, instructors facilitate the development of detailed project timelines, deconstructing the design process into discrete phases: market analysis, inspiration development, conceptual sketching,

material selection, pattern engineering, and garment construction. Each phase is accompanied by clearly defined milestones and deliverables, enabling effective time management and project progression.

Throughout the design process, regular progress evaluations are conducted to monitor development and provide formative feedback. Faculty members offer expert guidance and strategic solutions to address challenges, ensuring continuous project advancement. The pedagogical approach emphasizes collaborative learning, fostering an environment of peer-to-peer knowledge exchange and creative inspiration, thereby enhancing the overall quality of design outcomes and professional preparation.

Instructors must implement a rigorous process management system to ensure students adhere to established quality benchmarks at each stage of the design process. This encompasses evaluating the creativity of design sketches, the appropriateness of material selection, and the precision of pattern drafting. For any design elements that fail to meet the required standards, instructors should provide timely feedback and mandate revisions to uphold the integrity of the final design outcomes. Furthermore, instructors should actively facilitate interactions between students and apparel companies, offering guidance on employment and career progression. This can be achieved by inviting industry designers to participate in the evaluation of graduation projects, organizing exhibitions of student work, and nominating exceptional students for industry competitions. Such initiatives not only enhance students' practical skills but also significantly contribute to their professional development and future career opportunities.

The implementation of a standardized and scientifically rigorous management process for graduation design projects is a critical component of the ongoing reform in graduation design instruction within the fashion design curriculum. By clearly defining design requirements and objectives, developing comprehensive timelines and task breakdowns, instituting regular review and feedback mechanisms, enhancing process management and quality assurance, establishing objective evaluation and performance metrics, and facilitating career alignment and professional development guidance, the quality of graduation design education can be significantly elevated. This approach not only improves students' design competencies but also provides a robust foundation for their future professional growth.

In the graduation design module, we have implemented an innovative grouping strategy designed to cater to the diverse creative needs and professional development trajectories of our students. The grouping is primarily structured around the criterion of market maturity, which delineates two principal directions: "Fashion Apparel" and "Fashion Conceptual Design." These two groups differ not only in the requirements for creative output, presentation formats, and tutor allocations but also, and more significantly, in their distinct evaluation panels and assessment criteria.

5.3. Differentiated Instruction and Evaluation System Under Subgroup Orientation

5.3.1. Differentiated Design Criteria and Mentorship Under Group Specialization

The "Fashion Garment" category mandates designers to meticulously integrate industry dynamics with market demands, conduct an in-depth analysis of design trends, and comprehensively oversee the entire design realization process. This process spans from market research, target demographic analysis, and product positioning to pattern craftsmanship. The objective is to develop a series of works characterized by a high degree of market readiness and significant potential for commercial incubation.

Conversely, the "Fashion Creativity" category encourages designers to transcend conventional style boundaries, emphasizing the integration and articulate expression of individual design philosophies. It fosters experimental exploration in materials, forms, and color schemes, facilitating the complete creative journey from inspiration inception, design research, and conceptual development to design experimentation and garment fabrication.

In terms of mentorship, the "Fashion Creativity" category primarily relies on guidance from on-campus instructors. In contrast, the "Fashion Garment" category employs a "dual-mentor" system, where the on-campus mentor collaborates with the design director or lead designer from a partnering enterprise. The enterprise mentor, being part of a team, provides additional industry insights and practical expertise.

5.3.2. Building a Differentiated Evaluation System and Establishing Individualized Evaluation Criteria

In light of the fundamental differences in design orientation between the two categories, we have established tailored evaluation criteria and developed a differentiated assessment system. While both categories are evaluated based on the clarity of the design theme, innovation, fashionability, degree of completion, aesthetic sensibility, appropriateness of color (pattern) and material selection, and the rationality of structural patterns and process detailing, the emphasis varies significantly. The "Fashion Garment" category places particular importance on the market transformation potential of design concepts. Designers are required to balance the interplay between designers, products, consumers, and the industrial environment. Corporate mentors guide them in refining their design proposals according to market-driven principles.

Furthermore, the composition of the judging panels reflects the distinct positioning of the two categories. The "Fashion Creativity" category's judging panel includes academic tutors, experts from international institutions, buyers, and fashion media representatives. In contrast, the "Fashion Ready-to-wear" category's panel is predominantly composed of renowned brand designers, brand technologists, and fash-

ion media representatives, with over 70% of the judges hailing from the industry. Key enterprises and brands are specially invited to participate in the exhibition, enabling interested designers to engage in direct on-site interviews, thereby facilitating effective job matching. This approach not only enhances the practical value of graduation designs but also constructs a robust bridge for students' career development.

6. Conclusions

The reform direction of fashion design education in graduation projects should simultaneously emphasize three key aspects: creative design, cultural heritage preservation, and industry-academia integration. Building upon the existing foundation of creative experimentation, it is crucial to enhance the alignment between talent development objectives and the evolving demands of the fashion market. Within the context of current industry trends, strengthening the integration between graduation projects and corporate engagement can infuse new vitality into enterprise development, thereby propelling the advancement of fashion companies.

Educational institutions can gain valuable insights into industry requirements through the final exhibition of graduation projects, which serves as a direct feedback mechanism from industry enterprises. [10, 11] This approach effectively breaks down the barriers between academic education and industry practice, achieving a high degree of synchronization between talent cultivation and industry needs. Such alignment not only enhances the institution's reputation but also contributes to its sustainable development and the pursuit of educational excellence.

Through participation in graduation projects, students gain access to higher quality mentorship and more practical opportunities, thereby establishing a stronger foundation for their future career development. The practical experiences provided by industry partners enable students to reflect on their professional aspirations, facilitating better career planning and creating enhanced prospects for their professional growth and development within the fashion industry.

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Conflicts of Interest

The authors declare no conflicts of interest.

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