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The Effectiveness of Career Guidance Programs on Career Maturity and Employability of Fashion Design Students

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Abstract

The transformation of the global fashion industry driven by digital design technologies, platform-based marketing, sustainability imperatives, and expanding entrepreneurial opportunities has reshaped the competency profile expected of graduates in fashion education. In response, career guidance has become an increasingly important mechanism for supporting students' transition from education to professional practice. This systematic literature review examines the role of career guidance programs in fostering career maturity and employability within vocational and fashion-oriented higher education. Career guidance programs in this review refer to structured interventions such as career counseling, employability skills modules embedded in curricula, mentoring initiatives, internship preparation, and portfolio-based career development activities. Using a PRISMA-guided systematic selection process across major academic databases, 23 empirical studies published between 2015 and 2025 were analyzed. The findings identify three dominant approaches: developmental career guidance grounded in career development theory, competency-based employability programs, and experiential models integrated with industry engagement. The evidence indicates that structured and sustained career guidance interventions are associated with improvements in vocational goal clarity, decision-making confidence, career planning skills, job-search competence, and perceived employability. Programs incorporating internships, mentoring, and portfolio development tend to demonstrate stronger employability-related outcomes than counseling-only approaches. The synthesis further suggests a sequential pathway in which career guidance strengthens psychological readiness (career maturity), which subsequently contributes to behavioral preparedness and employability outcomes. However, the evidence base remains largely cross-sectional and relies heavily on self-reported outcomes, with limited longitudinal data on objective employment results. Overall, the review supports the development of an integrated, industry-aligned career guidance model tailored to vocational and fashion education contexts.

KEYWORDS

career guidance; career maturity; fashion design

Introduction

Digital systems for design, platform-based modes of marketing, increasing demands for sustainability and new routes to entrepreneurialism have dramatically reshaped the industry as we know it at a global level; these trends have formed the basis of a new competency profile in expectation levels of graduates on fashion degree courses. Higher education offerings for fashion programs are now tasked not merely with growing technical capability, but also creating incremental career-ready capacities that facilitate student navigation of complicated, non-linear and highly competitive labor markets (Agbo et al., 2024; Yeh, 2025). Having this in mind, career

guidance programs have appeared as a strategic institutional intervention to promote students' integration in the labour market, whether working for someone else or becoming an entrepreneur.

The concept of career maturity is theoretically derived from the developmental career theory, which is based on Donald Super's work regarding career development as a lifespan process in determining an individual's degree of readiness to engage in informed vocational decision-making. Career maturity (Marasaoli et al., 2024; Trebilco, 1984) is the extent to which someone can conduct self-assessment, career planning and other career decision-making that are suitable for their developmental stage. In turn, employability has become an idea that is rooted in human capital and competence-based frameworks (Dodd et al., 2019; Hughes et al., 2021), wherein adaptations such as achieving transferable skills, constructing professional identity, adaptability to the labour market and sustain meaningful employment have been priorities. The contemporary conversation around employability derives the relevance of psychological resources and career adaptability as key components for long term career success.

This is especially true in vocational domains, such as that of fashion education, where the lenses of career maturity and employability intersect. What defines the fashion sector then are short trend cycles, portfolio-driven recruitment, freelance and entrepreneurial career paths, and an increasing degree of technological reliance. As a result, career development is more complex in fashion programs than other traditional professional tracks. Thus, effective career guidance programs in this context must be targeted at both developmental readiness (career maturity) and labor market competitiveness (employability).

Empirical studies spanning various higher education contexts suggest that more structured career guidance interventions can foster self-efficacy, clarify one's career goals, enhance job-search skills and improve employment outcomes (Eimer & Bohndick, 2023; O'Connor, 2022; Ritzhaupt et al., n.d.; Su, 2019). Nonetheless, most existing research has focused on general education, commerce or engineering disciplines. Only a few are oriented towards fashion, and they seem to be niche at best. Moreover, there has been no systematic synthesis of the diversity in terms of intervention design (Azizah et al., 2020; Nashikhah et al., 2018) (e.g., individual counseling and mentoring forecasted to industry-specific workshops, experiential learning integration)—to see how they are effective in career maturity and employability outcomes.

A preliminary scoping search of major academic databases indicates that while several systematic reviews examine graduate employability or career development in higher education more broadly, few explicitly address vocational fashion education or analyze the developmental relationship between career guidance, career maturity, and employability outcomes. Existing reviews tend to focus either on employability skills frameworks or general career services, without examining the unique characteristics of creative and portfolio-based industries. Therefore, to the best of current knowledge, no systematic literature review has specifically synthesized empirical evidence on career guidance programs within fashion-oriented higher education while simultaneously examining their developmental and employability impacts.

Another limitation in the literature concerns conceptual fragmentation. Some studies treat career

maturity and employability as separate constructs, while others imply causal or mediating relationships between them without providing a clearly articulated theoretical framework. In addition, methodological limitations—such as cross-sectional designs, reliance on self-reported measures, and single-institution samples—restrict the generalizability of current findings. These gaps highlight the need for a systematic and theoretically integrated synthesis of existing empirical evidence.

In response to these limitations, this study conducts a systematic literature review to analyze the characteristics and effectiveness of career guidance programs within vocational and fashion-oriented higher education. Specifically, the review addresses three research questions: (i) What are the major features and theoretical underpinnings of career guidance programs in the context of fashion education?, (ii) How much do career guidance programs impact the career maturity of fashion students?, (iii) Do fashion students benefit from career guidance programs in terms of better employability outcomes?, (iv) What are the moderated/mediated factors (e.g., programs designed, industry engagement of programs, and incorporation of experiential learning of students, length or duration of intervention) that affect career guidance effectiveness? (v) Developing an Integrative Conceptual Framework in Fashion Education of Career Guidance Interventions, Career Maturity and Employability

This review serves to holistically document the emergent scholarship related to fashion and career as a systematic and theoretically funneled synthesis that contributes to scholarly conversation in this area of inquiry while providing evidence-based insights for the innovative practice of career development within fashion higher education.

Methods

This study was designed as a systematic literature review (SLR) according to the recent guidelines outlined by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) (Borenstein et al., 2011; Teixeira et al., 2021). To this end, the review pursued to synthesize empirical evidence on the effectiveness of career guidance programs in promoting higher education students' career maturity and employability with an analytical emphasis on vocational and fashion-related degrees (Abele et al., 2015). A systematic review approach was chosen for methodological transparency, replicability and to facilitate comprehensive mapping of the evidence.

Search Strategy and Data Sources

The literature search was conducted across three major academic databases widely used in education and social science research: Scopus, Web of Science, and ERIC. These databases were selected due to their extensive coverage of peer-reviewed publications in higher education, career development, and vocational education research. The search studies published from 2015 to 2025 in order to capture recent developments in career guidance and employability research.

The search strategy combined keywords related to career guidance interventions, career maturity, employability outcomes, and higher education contexts. Searches were performed within titles, abstracts, and keywords using the following Boolean search string. (See [Figure 1](#) and [Table 1](#)).

workflow. First, all retrieved records were exported into a reference management system, and duplicate entries were removed. Titles and abstracts were then screened for relevance based on the inclusion criteria. Subsequently, full-text articles were assessed to confirm eligibility. Reasons for exclusion at the full-text stage included lack of intervention evaluation, irrelevant outcomes, or non-higher education samples. (See [Figure 2](#)).

Screening Process

The screening process followed the PRISMA 2020



Figure 1. Search Keyword

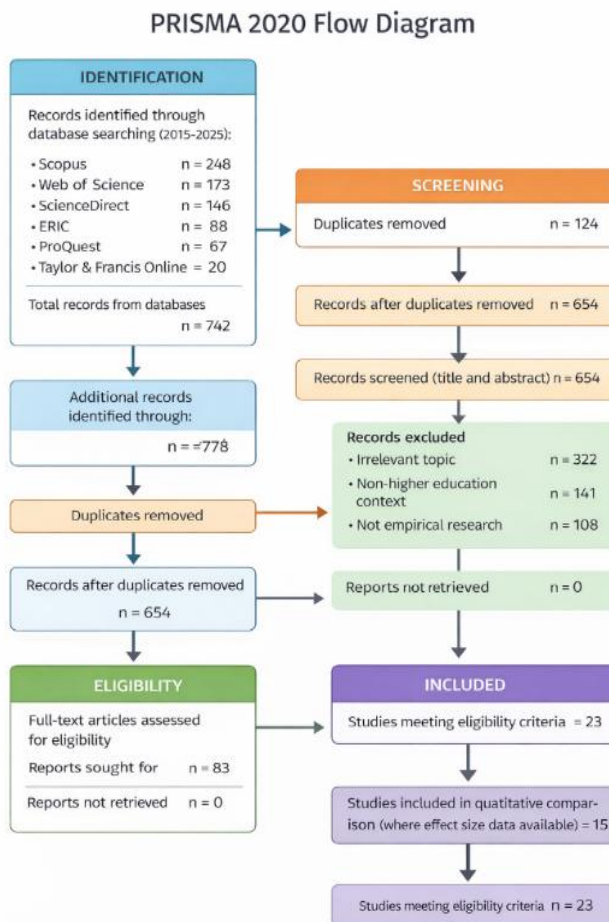


Figure 2. Flowchart Study Selection Process

Table 1. Criteria inclusion and exclusion

Criteria Type	Inclusion Criteria	Exclusion Criteria
Publication Type	Peer-reviewed journal articles	Editorials, opinion articles, dissertations, book chapters
Publication Year	Published between 2015–2025	Published before 2015
Research Design	Quantitative, qualitative, or mixed-method empirical studies	Studies without clear methodological reporting
Variables Examined	Examined at least one of the following relationships: • Career guidance → career maturity • Career guidance → employability • Career maturity → employability	Studies not examining relationships between career guidance, career maturity, or employability
Educational Context	Conducted in higher education or vocational education settings	Research limited to primary or secondary school contexts
Language	Articles written in English	Articles not written in English

Result and Discussion

This systematic review analyzes the impact of career guidance programs on career maturity and employability in vocational and fashion-oriented higher education. A total of 23 empirical studies published between 2015 and 2025 were examined using a structured selection process. The synthesis of the selected studies reveals three dominant models of career guidance interventions implemented in higher education contexts: (1) developmental career counseling, (2) competency-based employability programs, and (3) experiential industry-integrated approaches. Although these models share the common objective of improving students’ career readiness, they differ in their theoretical foundations, program components, and types of outcomes emphasized. (See [Table 2](#)).

RQ1: Features and Underlying Theory of Career Guidance Programs

The review reveals that interventions taking place in

fields of vocational and fashion-oriented higher education institutions are defined by three streams of theory: developmental career theory, human capital and employability frameworks, and experiential learning (Kolb, 1984; Morris, 2020).

First, a good number of all the interventions are based on Donald Super’s lifespan developmental perspective. Super’s career development literature inform the design of programs developed to foster vocational self-concept formation, readiness for career decision-making, and progressive career planning competencies. Such programs often include facilitated workshops, reflective exercises, psychometric tests and individualized counseling. The reviewed studies indeed show such programs conceptually align with the idea that career maturity is an indicator of individual preparedness to make age appropriate and context relevant career decisions (Ouweland et al., 2025).

Second, the increasing number of studies shows the impact of human capital theory and more recent graduate employability frameworks. Emerging from the synergetic intellectual enterprise of Gary Becker, these programs.

Table 2. Journal Relevant

Title	Key Findings	Gaps / Limitations Identified
Impact of vocational guidance on career choice and employability of vocational and technical education students in a public university in Anambra State (Agbo et al., 2024)	Vocational guidance does not significantly predict career choice ($F=3.843$, $p=.051 > 0.05$); contrary to most prior studies. It also showed no strong link to employability.	Small sample (227 students, one university only); self-report questionnaire; contradicts popular literature – calls for replication.
Development of Employability Skills of Vocational School Students in Bogor, Indonesia (Prabowo et al., 2023)	Short employability skills training program (communications, problem-solving, positive attitude, teamwork) significantly improved scores (Wilcoxon $p=.027$); all 6 students gained 10–13 points.	Very small sample ($n=6$); no control group; weak experimental design; short intervention.
The Impact of Career Education on Students’ Labour Market Perceptions (Nwakanma, 2024)	Narrative review: career education shapes labour-market perceptions, boosts employability, adaptability, and networks.	Purely narrative (no empirical data); calls for more diverse cultural/socioeconomic studies.
Bimbingan Karir dalam Membantu Pengambilan Keputusan Karir Siswa SMA: Literature Review (Aftiani et al., 2025)	Career guidance improves career maturity (planning, exploration, decision-making) in high-school students; multiple Indonesian studies confirm effectiveness.	Literature review only – no new primary data; focuses only on SMA (general high school), not specifically SMK.
Developing Fashion Design Vocational Career Guidance Module (Azizah et al., 2020)	ADDIE-developed module was “very feasible” (4.71/5), “very practical” (88%), and “effective” (N-gain 82.37%) for fashion-design SMK students.	Focused on one vocational field (fashion); small-scale implementation.

Peran Bimbingan dan Konseling untuk Meningkatkan Kematangan Karir Siswa Memasuki Era Society 5.0 (Fauziah et al., 2022)	Guidance & counselling builds career maturity (planning, exploration, decision-making) needed for Society 5.0; links to Super's theory.	Theoretical/literature-based; no empirical test of the proposed role.
Employability models for higher education: A systematic literature review and analysis (Eimer & Bohndick, 2023)	21 models reviewed; no single dominant "one-size-fits-all" model; most are not utilitarian/neo-liberal; narrow vs. broad vs. holistic classifications.	Systematic review ends March 2022; higher-education focus (not TVET-specific).
Peran Layanan Bimbingan Karier dalam Mendorong Kematangan Karier Siswa SMK (Pamuji et al., 2026)	Career guidance services positively improve SMK students' career planning, exploration, decision-making, affective readiness, and adaptation.	Literature review; effectiveness depends on implementation quality and school support.
Solidarity at Work: Concepts, Levels and Challenges (Morgan & Pulignano, 2020)	High-school fashion courses still emphasize construction skills; teacher industry experience increases coverage of design/merchandising topics. Pathway affiliation did not affect coverage.	Small sample (n=34); self-report; US-only context.
Efektivitas Bimbingan Karier terhadap Kematangan Karier Mahasiswa (Ash Shiddiqy et al., 2019)	University students show mature career levels but no systematic career guidance services exist at the studied institution; proposes collaborative model.	Single-university case; quantitative but limited generalisability.
Employability Skills in Technical Vocational Education and Training (TVET) (Din Nugraha et al., 2020)	Ranked employability skills for TVET graduates: (1) Social/Interpersonal, (2) Technical Knowledge, (3) ICT, (4) Communication, (5) Management, (6) Creative/Innovative, (7) Problem-Solving & Critical Thinking. Proposes framework.	Literature synthesis only; no primary data collection.
Fashion Design Entrepreneurship: Skills and Solutions to Create a Fashion Business (Fernandes, 2019)	61% of respondents (mostly employed) viewed career guidance as "pointless"; only 22% found it helpful. Need for earlier school-based guidance and real-world exposure.	Small non-random sample (n=103); mixed quantitative/qualitative; self-reported perceptions only; no pre/post intervention data.
Enhancing Graduate Employability Through the Role of the School Career Center (Purwanto et al., 2025)	BKK provides digital job info, recruitment facilitation, and strong industry partnerships; improves placement but limited by soft-skill gaps and curriculum-industry mismatch.	Single-school qualitative case study; small purposive sample; relies on interviews/observations; no quantitative employability metrics.
Career Maturity In The Digital Age: Challenges And Solutions For Guidance Services In High Schools (Riza Darwin et al., 2025)	Digital tools enhance career maturity but low digital-skill awareness and technology acceptance barriers persist. SCCT & TAM frameworks recommended for guidance.	Systematic literature review (PRISMA); only 4 studies synthesized; no primary data; focuses on general high-school, not SMK-specific.
Pengembangan Modul Bimbingan Karier Terhadap Kematangan Karier Siswa Kelas XII SMKN 1 Cihampelas (Nurfauziah et al., 2023)	Group-guidance module on career maturity achieved 100% media/practitioner feasibility, 81–86.8% student response, and +10.3% pre–post gain.	R&D (Borg & Gall); single-school implementation; small trial samples (n=12 model, n=38 usage); no control group.
Entrepreneurial Interest and Career Development of Vocational High School Graduates Fashion Design in the Digital Era (Vitariyanti et al., 2024)	Fashion-design SMK graduates show rising creativity/innovation; digital skills (apps, security, troubleshooting) are key to entrepreneurship; SMK-industry collaboration essential.	Qualitative (interviews/observations); only 2 schools; small sample (n=10); no quantitative entrepreneurial outcome measures.
The Influence of Employability Skills on Career Maturity in Yogyakarta Industrial Vocational School Students (Marasaoli et al., 2024)	Medium–high employability skills (48.3% medium, 43.3% high) positively predict career maturity ($\beta=0.882$, $p=0.000$, 42% variance explained).	Quantitative (n=60); single vocational school; self-report scales; cross-sectional design.
Career Guidance Intervention to Improve the Employability Skills of Students in Vocational High School (Amirullah et al., 2025)	21st-century career-guidance program significantly improved all employability indicators (Mann-Whitney U, $p<.005$ in most domains).	Quasi-experimental (n=64); single city; short 1-month intervention; no long-term follow-up.
Fashion Design Entrepreneurship: Skills and Solutions to Create a Fashion Business (Fernandes, 2019)	Fashion-design higher education lacks entrepreneurial focus; young designers face funding, network, and business-skill gaps. Proposes digital platform solution.	Mixed-methods (questionnaires + interviews); Portugal-focused; small qualitative sample; conceptual platform not yet implemented.
Competency-Based Training in Fashion Design Education: Graduate Competencies and Job Performance (Catherine et al., 2025)	CBT graduates demonstrate strong technical + generic skills; high self-efficacy links competencies to job creation, innovation, and quality standards.	Qualitative case study (n=13 graduates + 5 employers); single institution; retrospective self-reports; no control group.

The Fashion Design Entrepreneur: skills and solutions to create a fashion-related business (Fernandes et al., 2018)	Mixed-methods (questionnaires + interviews with students, graduates, entrepreneurs, incubators) reveal major gaps in fashion-design higher education: lack of entrepreneurial thinking, funding, networks, and business skills. Proposes a digital entrepreneurship platform model to bridge education–industry and create value in fashion SMEs.	Portugal-centric; conceptual platform not implemented/tested; small qualitative sample; relies on self-reported perceptions; definition of “fashion entrepreneur” remains debated.
Analysis of skill fashion designer (Ratna et al., 2019)	Qualitative interviews (n=5 designers) + literature: successful fashion designers need balanced hard skills (technical) + soft skills (communication, creativity, time management, negotiation, stress tolerance, market analysis). Emphasizes lifelong learning and interpersonal/intrapersonal competencies for industry survival.	Tiny purposive sample; purely descriptive/qualitative; no quantitative metrics or employer validation; Indonesia-focused without cross-country comparison.
Career Services as an institutional approach to employability (Hughes et al., 2021)	- Career Services as pathways for life project building and work transitions; future role as hubs for connections and community engagement. - Involves stakeholders in creating value and social transformation in evolving global contexts.	Limited exploration of organizational models beyond academic level. - Need for more studies on internationalization and interconnection in higher education challenges.

frame employability as an accrual of competencies, notably transferrable skills including communication, teamwork and interpersonal skills, problem-solving tricks and digital literacy. Here, career guidance is integrated into broader curricular frameworks and professional development courses; it is not presented as a separate counseling service. Lorraine Dacre Pool and Peter Sewell are among those whose multidimensional models of employability credit this discourse to be achieved through the interplay between skills, reflection, self-efficacy and labour market awareness (Choo et al., 2024; Comyn, 2018; Granata et al., 2023; Soproni, 2023).

Third, a model of experiential and industry-integrated has grown to be specifically compelling as an approach within contexts of vocational and fashion education. Academically, this is based on the theory of experiential learning pioneered by David Kolb which theorises that knowledge is created through concrete experience, reflective observation, abstract conceptualization and active experimentation. Programs following this model usually also include an internship, development of a portfolio, projects in live industry situations and one-on-one mentoring relationship with the practitioners. This is particularly relevant in creative industries where evidence of portfolio quality and professional contacts are critical contributors to employability and studies report that such integration creates better alignment between formal academic preparation and labour market expectations.

However, only a limited number of studies have examined career maturity and employability within a unified theoretical framework. Most existing research tends to treat these constructs as separate outcomes rather than conceptualizing them as part of a developmental pathway. From a theoretical perspective, career maturity reflects an individual's psychological readiness for career decision-making, whereas employability refers to the capability to obtain and sustain

meaningful employment within the labor market. Although these constructs are conceptually related, the literature rarely explains how improvements in career maturity may contribute to employability outcomes over time. As a result, the relationship between psychological readiness and labor market preparedness remains insufficiently theorized, highlighting the fragmented nature of current research.

RQ2: Effects of career guidance programs on career maturity

The findings indicate that structured career guidance interventions are generally associated with improvements in students' career maturity within higher education contexts. Several studies employing pre–post or quasi-experimental designs reported measurable gains in indicators such as career decision-making confidence, self-awareness, and career planning ability following participation in career guidance programs. In contrast, studies using cross-sectional survey designs primarily demonstrate positive correlations between participation in career development activities and higher levels of career maturity. Overall, the strongest evidence emerges from interventions with structured program components and durations exceeding several weeks, particularly those combining counseling activities with reflective career planning exercises. Of the twenty-three included studies, eighteen report statistically significant increases in at least one career maturity dimension after program participation. These outcomes are mostly referred to as increased clarity of vocational goals, improving confidence in making career decisions, heightened accuracy of self-assessment and development of planning skills (Harris & Clayton, 2020; Nashikhah et al., 2018; Ratna et al., 2019). These results align with career construction theory put forth by Mark Savickas, which, in conceptualizing career development as an adaptive process of meaning-making, identity formation and proactive planning suggests that there is a progressive

career trajectory. Quantitative studies report medium to large effect sizes; this was particularly true for interventions lasting longer than eight weeks. Studies of programs that use group counseling and reflective portfolio-based activities show the most consistent improvements in self-concept clarity and decision readiness. This pattern indicates that reflective depth and sustained engagement are key mechanisms by which development change occurs. Yet how sustainable these gains are remains underexplored. The majority of studies use short-term pre-test/post-test designs with little follow-up longitudinal follow up. Thus, whether career maturity gains are durable (i.e., persist) across academic transfers or early employment transitions is an open empirical question.

RQ3: Enhancement of Employability Outcomes

Fifteen studies directly explore employability-related outcomes. Takeaway: Overall, results show that career guidance interventions have a positive impact on perceived and skill-based employability indicators. Practices improve, such as job search strategies, interviewing preparedness, professional identity formation and networking confidence. Programs that include experiential elements, such as internships, work-based mentoring and collaboration between schools and industry report higher internship placement rates and smoother transitions from school to the workplace (Duarte et al., 2017; Jackson et al., 2024; Mohan et al., 2025; Soproni, 2023). These findings resonate with the career adaptability theory built by Mark Savickas, which describes concern, control, curiosity and confidence as adaptive resources enabling transitions in the labor market. Additionally, employability development is increasingly being discussed through the lens of protean and boundaryless career paradigms connected with Douglas T. Hall that focuses on self-directed and values-driven career management in fluid labor market scenarios. Nevertheless, methodological limitations persist. Objective employment outcomes—eg, employment status at 6 months postgraduation or salary trajectory—are seldom reported. Instead, most studies use self-reported perceived employability indicators. Although perception is a significant psychological predictor of career behavior, data limitations preclude longitudinal tracking in the labor market and causal inference on actual attained employment.

RQ4: Moderating and Mediating Factors

Four major moderating and mediating factors affect program effectiveness. Industry Engagement. Content that features collaboration with industry mentors, real projects or internships tend to have stronger effects on career maturity and employability. Attraction of motivational inertia from industry exposure: The link between development of self-concept and acquisition of behavioral competence is strengthened Duration and Intensity. Delivery Format: When the intervention is

delivered as an academic semester course (or longer), developmental gains are larger than workshop- or format-based ones. Long-term exposure leads to iterative reflection and skill practice, as well as identity consolidation. Experiential Learning Integration (Morris, 2020; H. Wang & Raj, 2017; Wibowo et al., 2025). Guidance activities–employability outcomes relationship is mediated by: portfolio development, project-based learning (PBL) and authentic assessment practices. Experiential elements seem to convert psychological readiness into demonstrable professional competence. Digital Career Tools. Such post-2020 studies increasingly accentuate digital career platforms, virtual mentoring and professional networking tools as enhancers of perceived employability. Digital identity formation, especially via professional platforms, is necessary to increase visibility and career capital in creative industries. Finally, these moderators collectively suggest that the effectiveness of career guidance is dependent not only on individual counseling interventions, but rather on its structural integration, pedagogical design, and contextual alignment.

RQ5: Building an integrative conceptual framework

Findings across studies inform an integrative pathway model linking psychological and labor market outcomes. The evidence suggests a sequential relationship: Career Guidance Intervention → Psychological Readiness (Career Maturity) → Development of Behavioral Competence → Employability Outcomes (Catherine et al., 2025; Dodd et al., 2019; Fernandes, 2019; Nashikhah et al., 2018; Ratna et al., 2019). In this route, career maturity acts as a partial mediating construct between structured-guidance intervention and employability effects. Individuals develop skill acquisition and professional identity engagement which influence employability indicator through developmental readiness. The most effective programs explicitly integrate reflective counseling, competency development and industry exposure. This integrative configuration scores well in that it is a coherent, evidence-led framework for vocational and fashion education contexts which integrates developmental theory, human capital perspectives and experiential learning principles.

Cross-Cutting Patterns

The synthesis reveals some broad patterns. First, positive relationships between career guidance and both career maturity and employability are consistently reported across contexts. Second, methodological rigor differs widely and longitudinal evidence is limited. Thirdly, contextual research in fashion education is lacking; studies specifically focusing on the field of the fashion education context are underrepresented in comparison to wider vocational or business disciplines. Finally, recent publications increasingly highlight issues such as adaptability, digital literacy and hybrid professional identity formation in the confrontation with a fast-changing labor market(s).

Summary of Main Findings

The accumulated evidence shows that well-implemented careers and student services programs make a positive difference to the career maturity and employability outcomes of students in higher education. Program duration, experiential integration and industry collaboration strongly affect effectiveness. Developmental counseling certainly adds to psychological readiness, but experiential and competency-based components translate to visible employability dividends. The findings underline the need for a cohesive integrated career guidance model, theoretically sound and context-relevant to vocational and fashion educational settings where professional identity, portfolio legitimacy and industry connectability decisively impact on graduates' success.

This systematic review synthesizes existing evidence on the role of career guidance interventions in supporting the development of career maturity and employability-related competencies among higher education students, with particular relevance to vocational and fashion-related disciplines. The findings contribute to theoretical integration by linking developmental career perspectives with employability frameworks, highlighting how structured guidance interventions can support both psychological readiness for career decision-making and labor market preparedness. From a policy and institutional perspective, the results suggest that career guidance should be conceptualized beyond a peripheral student-support service, and instead positioned as a strategic institutional mechanism for strengthening graduates' adaptability and competitiveness in increasingly dynamic and uncertain labor markets.

Theoretical perspectives of career development strongly affirm the developmental assumptions (Jerald et al., 2024; Rudolph et al., 2019; W. Wang et al., 2018) proposed who viewed career development as a lifelong process that is influenced by changing self-concept and vocational readiness. Across all the studies reviewed, structured career guidance interventions positively influenced students' capacity to clarify vocational aspirations, make informed decisions and formulate valid plans for vocations. These results mirror foundational dimensions of career maturity and indicate that guided reflection and developmental scaffolding continue to be fundamental modalities for delivering effective career preparation. But the review also shows that developmental readiness is not enough on its own to guarantee successful integration into the labour market. Modern employability frameworks focus on transferable skills, professional identity development, adaptability and responsiveness to industry needs. The results suggest that career maturity functions as a psychological underpinning for employing employability skills. Put differently, career guidance interventions seem to trigger a developmental pathway that paves the way for greater self-awareness and decision-making capacity and translates into enhanced skills development, professional conduct, and ultimately better job placement outcomes.

This integrative interpretation connects two research

traditions that have often been studied in isolation: theories of career counseling and employability research. Instead of viewing career maturity and employability as distinct outcomes, the synthesis proposes a developmental process connecting guidance interventions to psychological preparedness and from there to competitiveness in the labour market (Allen, 2016; Yulianti & Fitriansyah, 2024). This is also conceptually contributing to integrating knowledge, helping by explaining how career guidance was exerting its effects. Another lesson that emerges from the review relates to experiential learning. The strongest and most consistent employability effects were found in programs that included reflective counseling components as well as authentic engagement with industry — through internships, mentoring partnerships, and portfolio-based assessments. This data indicates that identity formation and competency building happen best through cycles of reflective practice on their world experiences. Construing experiential integration as a mixture between the dualism of researcher and participant, appears to be particularly valid at least in fashion education where careers are often portfolio-driven, entrepreneurial avatars, that walk along non-linear paths lessons appear to segregate themselves from tangible career skills.

The review indicates that the intensity and duration of career guidance interventions are associated with their effectiveness. Programs that are more intensive and longer in duration, such as semester-long modules or multi-session interventions, tend to show stronger improvements in career maturity and employability skills than short-term workshops or single-session activities. This suggests that sustained and structured career development engagement provides greater opportunities for reflection, skill development, and practical career planning. One-off, short-term workshops can certainly heighten awareness of the importance of career development, but the most sustainable benefits in terms of both career maturity and employability are achieved by embedding career development initiatives into curricula over an extended period. These results highlight the need for institutional commitment and longitudinal design of programs. Rather than a one-time event that occurs near graduation, career development should be viewed as an ongoing developmental process. Indeed, industry engagement appeared to be a key moderating factor (Catherine et al., 2025; Fernandes et al., n.d.). Like other guidance practitioners, Career guidance practitioners can collaborate directly with employers and industry partners to create internship, mentoring, and industry-engagement opportunities that strengthen students' employability, designers and creative professionals to ensure your activities are relevant and authentic. Structured mentoring and industry-based projects in the curriculum help students perceive higher employability and clearer professional identities. Furthermore, recent research shows the increasing relevance of digital career competencies such as branding our profiles on digital platforms, presenting our portfolios online or networking based on specific sites (e.g. LinkedIn).

Such changes illustrate demographic transformations in the labor market and indicate a need for digitally responsive guidance models.

The ramifications for vocational and fashion education are immense. Institutions need to transition from skills-based technical training to a more robust framework of value creation within the career ecosystem. Whether by embedding structured career development pathways throughout the curriculum, formalizing industry mentorship systems in place, integrating reflective portfolio assessment to create a return on investment for employers who support community tasks or incorporating digital employability competencies across traditional discipline coverage. These measures improve individual student outcomes and strengthen institutions' responsiveness to industry. In terms of policy implications, the results provide evidence for institutionalizing career guidance in higher education governance structures (Arshad et al., 2018; Hooley & Rice, 2019; Hughes et al., 2021; Riza Darwin et al., 2025). Career development services should be embedded in quality assurance systems and driven by measurable outcome indicators like graduate destination tracking and longitudinal measures of employability. Standardized career guidance benchmarks within national vocational accreditation systems may also assist national education frameworks. With creative and digital economies growing, career guidance needs to be recognized as a strategic lever for workforce development and economic sustainability.

However, methodological shortcomings are apparent despite the overall positive evidence. The preponderance of cross-sectional designs limits causal inference, and few studies measure objective employment outcomes beyond self-reported perceptions. Furthermore, the literature specifically embedded in fashion education remains scarce, reaffirming the previously recognised generative gap. Future research should ideally adopt longitudinal and quasi-experimental designs, involve objective labour market data and look at sector-specific dynamics of creative industries.

Conclusion

This systematic review synthesizes empirical evidence on the role of career guidance programs in supporting the development of career maturity and employability among higher education students, with particular relevance to vocational and fashion-related

adapted to increasingly globalized labor markets and transnational creative industries, while accounting for cultural differences in career decision-making,

fields. The findings suggest that structured and sustained career guidance interventions are associated with positive developmental and career-related outcomes. Across the reviewed studies, students who participate in more comprehensive career guidance programs tend to report higher levels of career decision-making readiness, clearer vocational identity, stronger professional competencies, and higher levels of perceived employability.

From a theoretical perspective, the review contributes to bridging developmental career theory and employability frameworks. The findings indicate that career maturity may function as an important psychological antecedent to employability-related competencies. Rather than representing entirely separate constructs, career maturity and employability appear to be developmentally connected, with career guidance interventions often strengthening self-knowledge, occupational awareness, and career planning capacity. These developmental processes may subsequently support the application of transferable skills and professional behaviors that are valued in contemporary labor markets.

The review also highlights the importance of program design characteristics. Evidence across studies suggests that stronger and more consistent outcomes are observed when career guidance interventions are integrated across the curriculum, supported by industry engagement, and reinforced through experiential learning opportunities. In creative and fashion education contexts—where career trajectories are often non-linear, portfolio-based, and entrepreneurial—combining reflective career development activities with authentic industry exposure appears particularly beneficial.

From an institutional perspective, the findings indicate that career guidance can play a strategically important role in supporting graduate transition and employability outcomes within higher education. Institutions may therefore consider embedding career development more systematically within academic programs, rather than positioning it solely as a standalone support service. One practical implication of this review is that fashion and vocational programs may benefit from integrating industry collaboration, portfolio development, and experiential learning components as core elements of career guidance provision.

Finally, the review highlights several directions for future research. Comparative and cross-cultural studies are needed to better understand how sociocultural contexts shape career development processes and perceptions of employability. In addition, future research could explore how career guidance models can be professional identity formation, and pathways into creative work.

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