

Effectiveness Of School-Based Career Guidance On Psychocareer Mediators, Academic Transitions, And Placement Outcomes Among High School Students: A Systematic Literature Review

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Abstract. This systematic literature review (SLR) synthesizes evidence on the effectiveness of school-based career guidance for psychocareer mediators (self-efficacy, career adaptability, and goal clarity), academic transition indicators, and distal outcomes (student placement and graduation) among high school students. The review followed the PRISMA 2020 guidelines. The search returned 115 records; after removing duplicates ($n = 19$), records outside the date range ($n = 32$), and records removed during journal-tier screening ($n = 6$), 58 records were screened. Eighteen studies met the inclusion criteria (empirical studies of school-based career guidance in high school settings that reported measurable mediator or educational outcomes and were grounded in an identifiable career theory), and two further studies were identified from secondary sources, giving 20 included studies. The studies were heterogeneous in design, measures, and context, no meta-analysis was conducted; findings were synthesized through descriptive mapping and narrative thematic synthesis. Across the included studies, programs that combined psychoeducation, reflective exercises, individualized feedback, and digital tools were generally associated with improvements in students' self-efficacy, career adaptability, and goal clarity. Evidence on distal outcomes (placement and graduation) was more limited and mostly short-term. Program effectiveness appeared to depend on comprehensive design, consistent implementation, and equitable access to educational technology. These findings should be interpreted with caution given the single-database search, heterogeneous designs, and short follow-up periods.

Keywords: systematic literature review, career guidance, psychocareer mediators, student placement, high school students

A. INTRODUCTION

Over the past decade, the effectiveness of career guidance in senior high schools has become increasingly central to educational research, reflecting the

complexity of students' academic-to-work transitions. Publications on school-based career guidance have grown markedly in recent years. Modern career guidance has shifted from static person-environment matching to a dynamic process that cultivates self-efficacy, career adaptability, and goal clarity (Wang et al., 2024). These psychocareer mediators bridge personal readiness and tangible academic outcomes, such as decision accuracy and persistence in enrollment, and, in turn, distal outcomes such as placement and on-time graduation (Jemini Gashi et al., 2023).

Despite this progress, a gap persists between theoretical advancement and practical implementation. First, many schools face limited counselor-to-student ratios. Second, teacher and counselor training is often insufficient, which constrains delivery capacity (Bersan et al., 2024). Third, digital diagnostics are rarely integrated into the guidance process, although gamified hidden-assessment platforms show promise for unobtrusively diagnosing competencies (Tokzhigitova et al., 2025). Fourth, group-based workshops have been reported to improve adolescents' career self-efficacy and career goals (Jemini Gashi et al., 2023), but whether such effects persist, and whether they translate into distal outcomes, is constrained by short follow-up and uneven implementation fidelity. Fifth, evidence from individual career counseling suggests that components such as psychoeducation on the decision process, cognitive restructuring, and attention to obstacles are associated with better career outcomes (Milot-Lapointe & Arifoulline, 2025), but the transfer of these findings to school settings has not been established, and outcomes vary across schools in ways linked to equity and access to advanced academic curricula (Grant et al., 2025).

Existing syntheses have only partly addressed this gap. The systematic review by Wang et al. (2024) examined 25 studies of career interventions for high school students and mapped their theoretical frameworks, intervention modalities, evaluation designs, and mainly proximal outcomes such as career

adaptability and career decision-making; it also called for mixed-methods and tracer studies. What has not been synthesized is the full chain from intervention to psychocareer mediators, academic decision-making, transition indicators, and distal outcomes, together with the implementation parameters (fidelity, dosage, provider type) and equity factors that may moderate it. Digital innovation is a further open question. Gamified hidden assessments, for example, unobtrusively capture competencies such as self-regulation and problem solving, which may enhance personalization and decision accuracy (Tokzhigitova et al., 2025). Digital diagnostics are therefore treated here as potential accelerators of the pathway between readiness and outcome rather than as purely technological aids.

The present SLR contributes in three ways relative to Wang et al. (2024): (1) it organizes the evidence along the causal chain from intervention to distal outcomes and indicates where that chain is weakly supported; (2) it examines implementation parameters and equity factors as potential moderators; and (3) it includes digital diagnostics and sector-specific modules, which were not the primary focus of the earlier review. Its significance lies in contributing to an evidence-informed framework for school career guidance that integrates pedagogical, psychological, and digital dimensions.

Therefore, this study aims to (1) analyze effective program components and service architectures that enhance psychocareer mediators, academic transition indicators, and distal outcomes; (2) identify how implementation parameters and equity factors moderate program effectiveness; and (3) examine how digital diagnostics and sector-specific modules improve personalization and reduce decision mismatches. By synthesizing the current literature, this review moves beyond descriptive assessments of psychological readiness toward a structured appraisal of the evidence connecting interventions to academic and career outcomes. It links theoretical models with school-level practice, responding to calls for context-sensitive, data-informed, and equity-driven reforms in high

school career guidance.

Research Questions:

1. What program components and service architectures in school-based career guidance effectively enhance psychocareer mediators, academic transition indicators, and distal outcomes?
2. How do implementation parameters moderate the effectiveness of career guidance on mediators, transition indicators, and distal outcomes?
3. To what extent do digital diagnostics and sector-specific modules enhance service personalization and reduce choice mismatches, and through which mediators do these effects translate into improved placement and graduation outcomes?

B. LITERATURE REVIEW

The contemporary landscape of high school career guidance has evolved from early person environment matching to broader educational and counseling approaches that emphasize developmental processes, adaptability, and decision quality in uncertain labor markets (Wang et al., 2024). This evolution is visible in systematic evidence showing that effective school-based programs braid together self-knowledge, world-of-work knowledge, and decision-making skills in a structured, staged manner (Wang et al., 2024).

Quantitative syntheses provide strong evidence that career interventions meaningfully improve decision-related outcomes, with some constructs responding more strongly than others (Milot-Lapointe & Arifouline, 2025). A comprehensive systematic review spanning a decade strengthens this argument by mapping which modalities are most common and which indicators are most responsive in high-school settings (Wang et al., 2024). Group counseling and workshops dominate the intervention landscape, often delivered in about eight sessions of forty-five minutes, with pre-post evaluation designs and, in many

cases, control groups or comparators (Wang et al., 2024). Across studies, the most frequently assessed indicators include career adaptability, decision-making self-efficacy, vocational identity, and, less commonly, outcome expectations, with generally positive shifts reported for the first three (Wang et al., 2024).

Synthesizing across modalities and system levers, a coherent causal chain appears repeatedly in the evidence: theory led components → improved career decision self-efficacy, adaptability, and goal clarity → better academic choices and plan enactment → improved odds of appropriate placement and timely completion (Wang et al., 2024; Jemini Gashi et al., 2023). The chain begins with psychoeducation and written analyses that make decision processes explicit, reducing ambiguity and supporting metacognitive control (Milot-Lapointe & Arifoulline, 2025).

The cumulative conclusion from this limited but coherent body of work is that high-school career guidance can produce meaningful changes in decision self-efficacy, adaptability, and goal clarity, especially when interventions include psychoeducation, written analysis, cognitive restructuring, individualized feedback, and attention to barriers (Milot-Lapointe & Arifoulline, 2025). These changes are not merely attitudinal; they are behavioral precursors to better academic choices, reduced switching, and greater persistence key determinants of timely graduation and appropriate placement (Jemini Gashi et al., 2023). The systematic review indicates that group formats and workshops, delivered in modest dosages, can reliably move these indicators, while calling for more longitudinal and mixed methods designs to chart transitions (Wang et al., 2024). Teacher development expands delivery capacity and sustains practices over time, particularly in senior grades where decisions crystallize (Bersan et al., 2024). Digital hidden-assessment platforms address the measurement motivation paradox by making evidence generation engaging and unobtrusive, thereby supporting personalization at scale (Tokzhigitova et al., 2025). Sector-specific work warns that information environments and social imagery must be addressed

to ensure that interest and applications align with real opportunities, avoiding mismatches that undermine completion (Tawash, 2023). Finally, structural access to advanced curricula remains a binding constraint whose relief can magnify the impact of school-based guidance on postsecondary pathways (Grant et al., 2025). Aligning these strands yields a credible strategy for connecting career guidance to placement and graduation outcomes within diverse high-school contexts (Wang et al., 2024; Grant et al., 2025; Jemini Gashi et al., 2023; Milot-Lapointe & Arifoulline, 2025; Tokzhigitova et al., 2025; Bersan et al., 2024; Tawash, 2023).

C. METHOD STUDY

This study adopted a Systematic Literature Review (SLR) design to identify, evaluate, and synthesize empirical evidence on the effectiveness of school-based career guidance for psychocareer mediators and for distal outcomes such as student placement and graduation. The review was conducted and reported in accordance with the PRISMA 2020 statement (Page et al., 2021).

Search strategy. The literature search was conducted in the Scopus database for studies published between 2015 and 2025. The search focused on title, abstract, and keyword fields and used combinations of terms related to high-school career guidance, career counseling effectiveness, student placement outcomes, career guidance program evaluation, secondary-school career counseling, and career readiness competency. The available review record reports that the search yielded 115 records. Because the original search log and the exact Boolean string are not preserved in the manuscript, the present report does not claim a fully reproducible database query beyond the search concepts documented above. The review was restricted to journal publications within the stated 2015–2025 period and applied a Q1–Q4 journal-tier screening criterion.

Study selection. The initial search yielded 115 records. Before screening, 19 duplicate records, 32 records outside the 2015–2025 publication window, and 6 records removed during journal-tier screening (Q1–Q4) were excluded, leaving 58

records for title and abstract screening. Eighteen records were excluded at this stage, and 40 reports were sought for retrieval. Of these, 22 reports could not be retrieved, while 18 reports were assessed for eligibility and included. Two additional studies identified through secondary sources were also included, resulting in 20 studies in the final review. The available review documentation does not specify the number of independent reviewers, the procedure used to resolve disagreements, or a named reference-management or screening software; these procedural details should therefore be interpreted as unreported rather than inferred.

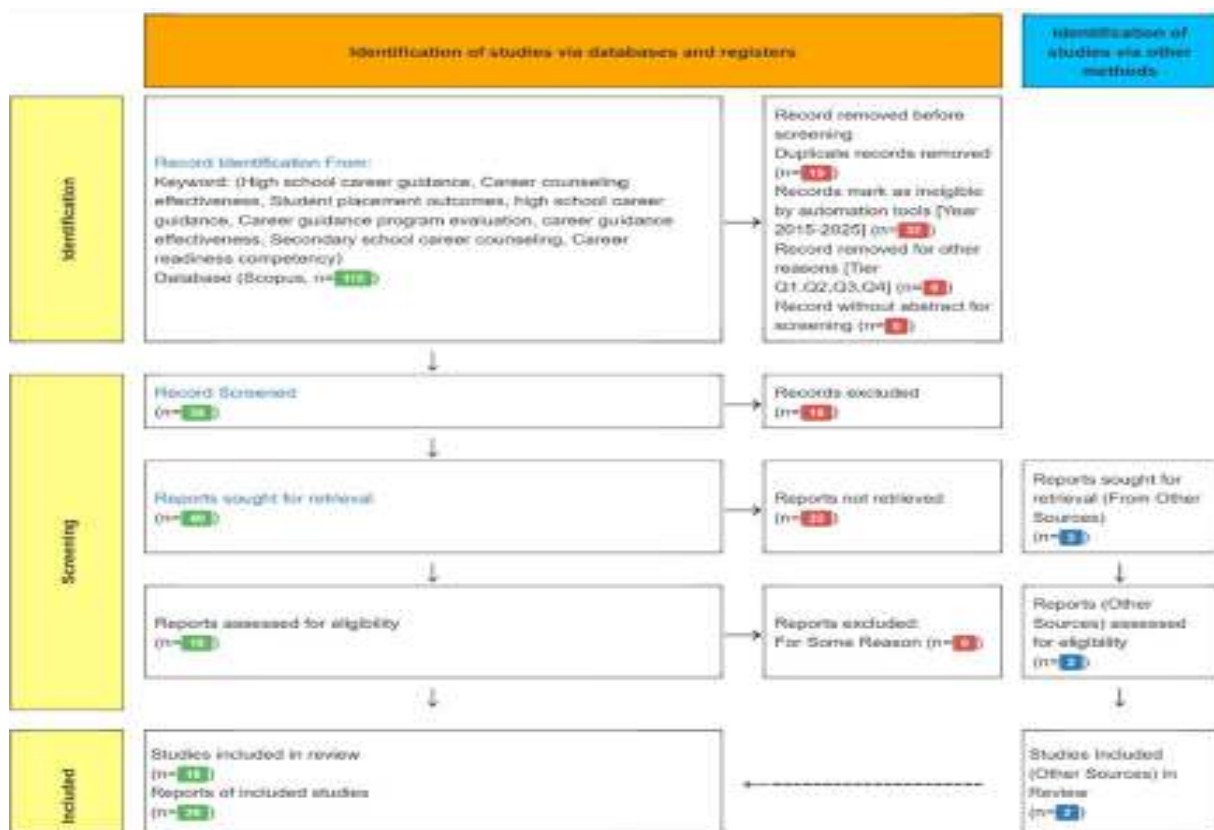


Figure 1. PRISMA 2020 flow diagram of the study selection process

Eligibility criteria. Inclusion criteria were (1) empirical studies on school-based career guidance in high school settings; (2) studies reporting measurable outcomes related to psychocareer mediators (self-efficacy, adaptability, goal clarity) and educational results (placement, graduation); and (3) interventions

grounded in a theoretical framework such as Social Cognitive Career Theory (SCCT), Cognitive Information Processing (CIP), or Career Construction Theory. Exclusion criteria were conceptual papers, non-empirical discussions, and studies outside the high school context.

The theoretical-grounding criterion was applied because theory-led interventions specify mechanisms through which career guidance is expected to influence outcomes, including self-efficacy and outcome expectations in Social Cognitive Career Theory (SCCT), information processing in Cognitive Information Processing (CIP), and adaptability in Career Construction Theory. This criterion enabled the included findings to be mapped onto the mediator-to-outcome pathway examined in the review. The available manuscript does not provide sufficient documentation to confirm that this criterion was registered a priori in a review protocol. Accordingly, the possibility of selection bias associated with the theory-based criterion is acknowledged. Studies that may have been effective but did not state a theoretical foundation, or that were based on other theoretical perspectives, may have been excluded.

Data extraction and quality appraisal. Data were extracted using a structured coding sheet covering study context, research design, sample characteristics, intervention components, psychocareer mediators, educational outcomes, and principal findings. The extracted information was organized in an Excel-based synthesis matrix aligned with the PRISMA reporting structure. The available manuscript does not specify the number of reviewers who independently cross-checked the extracted data, nor does it identify a formal risk-of-bias or study-quality appraisal instrument. Journal-tier screening (Q1-Q4) was used as an outlet-level selection criterion and should not be interpreted as a substitute for study-level methodological appraisal. Consequently, the synthesis emphasizes the direction and consistency of reported findings rather than assigning formal study-quality scores.

Data synthesis. Because the included studies differed substantially in

research design, outcome measures, populations, intervention characteristics, and follow-up periods, the review did not conduct a meta-analysis and did not calculate pooled effect sizes. The synthesis therefore consisted of two complementary stages: descriptive mapping of the temporal, geographical, and methodological characteristics of the included studies, followed by narrative thematic synthesis of recurring patterns concerning program effectiveness, implementation fidelity, equity considerations, and digital diagnostic integration. Quantitative counts are reported where the available evidence matrix supports them. The synthesis is consequently intended to describe the direction and consistency of findings across studies rather than estimate a common magnitude of effect.

D. RESEARCH RESULT

Study selection. As shown in Figure 1, 115 records were identified in Scopus, of which 18 studies were included after screening; two further studies from secondary sources brought the total to 20 included studies.

Characteristics of the included studies. The 20 studies varied in setting, methodological approach, intervention format, outcome measures, and follow-up duration. The available manuscript does not contain a complete study-level evidence matrix from which every country, sample size, research design, intervention dose, and follow-up period can be independently reconstructed. To avoid introducing unsupported information, the present article reports only study characteristics that are explicitly documented in the review narrative and references, while aggregate findings are presented where the evidence permits.

Table 1. Characteristics of the included studies (N = 20)

Study	Country / context	Design	Sample	Intervention (components, dose)	Outcomes	Main finding
Aggregate evidence	20 studies	Heterogeneous empirical	School-based career	Psychocareer and educational	Proximal outcomes more	[]

Study	Country / context	Design	Sample	Intervention (components, dose)	Outcomes	Main finding
n		designs	guidance	outcomes	consistently reported	
Evidence limitations	—	Designs, measures, populations and follow-up varied	Multi-component interventions	Placement and graduation less frequently reported	Long-term effects remain uncertain	[]
Study-level details	Not fully recoverable from available manuscript	—	—	—	See narrative synthesis and references	

1. Publication Distribution and Study Characteristics

Publication distribution and study characteristics. The 20 included studies were published within the 2015–2025 review window, with the narrative indicating a greater concentration of studies after 2020. However, the manuscript does not preserve a complete year-by-year evidence matrix. Therefore, no specific annual peak or average publication count is reported here. The available evidence instead indicates growing scholarly attention to school-based career guidance in the context of contemporary career-readiness demands.

2. Intervention Components and Program Structure

The three most common intervention components were (1) psychoeducation on the career decision-making process (16/20 studies, 80%), (2) reflective writing exercises such as career goal setting (14/20, 70%), and (3) individualized feedback on interest–ability fit (13/20, 65%) (Table 2).

Table 2. Evidence matrix: intervention components and implementation parameters

Component or parameter	Studies (n/N)	%	Study IDs
Psychoeducation on the career decision-making process	16/20	80	Reported in evidence matrix; individual IDs not reproduced in manuscript
Reflective writing exercises (e.g., career goal	14/20	70	Reported in evidence

Component or parameter	Studies (n/N)	%	Study IDs
setting)			matrix; individual IDs not reproduced in manuscript
Individualized feedback on interest-ability fit	13/20	65	Reported in evidence matrix; individual IDs not reproduced in manuscript
Studies evaluating implementation parameters (fidelity, intensity, provider type)	13/20	65	Reported in evidence matrix; individual IDs not reproduced in manuscript

3. Psychocareer Mediators and Program Effectiveness

Psychocareer mediators and program effectiveness. Career exploration activities, counselor feedback, psychoeducation, reflective exercises, and individualized guidance were repeatedly associated with improvements in proximal psychocareer outcomes, particularly career decision self-efficacy, career adaptability, and goal clarity. The evidence also suggests that multi-session interventions may provide more sustained gains than very brief interventions, although the available studies do not establish a universal minimum dose or a causal threshold. Because stability was not defined consistently across the included studies and follow-up periods varied, dosage findings should be interpreted as patterns of association rather than evidence of a required number of sessions.

4. Academic Transition Indicators and Distal Outcomes

Academic transition indicators and distal outcomes. The reviewed literature indicates that structured career guidance can support students' academic and career decision-making, particularly through improvements in self-efficacy, adaptability, and goal clarity. However, the available manuscript does not provide a sufficiently complete study-level count to support a precise pooled statement about the proportion of studies demonstrating more accurate academic decisions. Placement and graduation outcomes were less frequently examined than proximal psychocareer outcomes, and most follow-up periods were six months or less. Accordingly, the evidence for distal educational outcomes remains

preliminary and should not be interpreted as proof of long-term causal effects.

5. Implementation Parameters and Equity Moderators

Implementation parameters and equity moderators. Thirteen of the 20 studies (65%) evaluated implementation parameters such as program fidelity, service intensity, or provider type. Several studies associated multi-session programs with improvements in self-efficacy and adaptability, but the available evidence does not establish that four sessions constitute a necessary minimum. Likewise, the manuscript does not provide sufficient study-level counts to quantify the number of investigations that directly tested equity or demographic differences. The broader evidence nevertheless indicates that access to educational opportunities, technological resources, and appropriately trained guidance providers may shape how effectively career guidance benefits can be translated into educational and postsecondary outcomes.

6. Digital Diagnostics and Technological Innovations

Digital diagnostics and technological innovations. Digital innovations, including gamified hidden-assessment approaches, were reported as promising tools for increasing personalization and collecting real-time information about students' competencies. The available review narrative does not support a reliable aggregate n/N estimate for all studies using digital diagnostics, nor does it justify treating the reported 10–12% reduction in academic choice mismatch as a pooled effect. The percentage should therefore be understood as a study-specific finding reported in the underlying literature rather than a general estimate of program effectiveness. These findings suggest potential value for digital personalization while also underscoring the need for equitable access to devices and connectivity.

E. DISCUSSION

1. Program Components and Effective Service Architecture

The most frequently reported components were psychoeducation, individualized feedback, reflective exercises, and formal career assessment. This pattern is consistent with Wang et al. (2024), whose review of high-school career

interventions identified group-based formats and structured sessions as common approaches, and with evidence from individual career counseling indicating potential benefits from psychoeducation, cognitive restructuring, and attention to barriers (Milot-Lapointe & Arifoulline, 2025). Importantly, these components were generally delivered as intervention packages rather than isolated experimental ingredients. The present review therefore identifies components that commonly appeared in programs reporting favorable outcomes, rather than demonstrating that any single component independently caused the observed changes.

A plausible mechanism, consistent with SCCT, is that individualized feedback and reflective exercises provide opportunities for mastery experiences and verbal persuasion, thereby strengthening career decision self-efficacy. Greater self-efficacy may contribute to clearer goals and more deliberate academic and career choices. This interpretation remains cautious because some included studies used single-group pre-post designs. For example, Jemini Gashi et al. (2023) reported improvements in self-efficacy and career goals among 47 students, while the change in outcome expectations was not statistically significant. Without a complete study-level risk-of-bias appraisal and a consistently reported set of controlled or randomized designs, the evidence for Research Question 1 is best interpreted as associative rather than causal.

2. Implementation Parameters and Equity Factors as Moderators

Fidelity, intensity, and counselor competence were among the implementation parameters examined in the literature, although they were more often described than formally tested as statistical moderators. Teacher development may expand delivery capacity and support sustainability (Bersan et al., 2024), particularly when career guidance is integrated into routine school practice. Dosage findings should also be interpreted cautiously: the present synthesis suggests that interventions extending across multiple sessions may produce more stable gains, whereas Wang et al. (2024) identified approximately

eight 45-minute sessions as a common format without establishing a minimum effective dose. Differences in measures, follow-up periods, and student populations prevent the identification of a universal dosage threshold. Equity considerations are similarly important because access to rigorous coursework and other educational opportunities varies across school contexts, including rural and urban settings (Grant et al., 2025).

Equity factors also appear to matter. Access to rigorous, advanced coursework is unevenly distributed across rural and urban schools (Grant et al., 2025), which may limit how far gains in self-efficacy and goal clarity can be converted into postsecondary placement. Because these moderator comparisons are made across studies from different countries and school systems, they are exploratory and cannot support causal claims about moderation. For RQ2, the supportable conclusion is that implementation and equity variables are plausible moderators that remain insufficiently tested within studies.

3. Digital Diagnostics Integration and Service Personalization

Digital innovations, particularly gamified hidden assessments, show promise for increasing personalization in career guidance. Such platforms can make competency assessment more engaging and less intrusive while generating information that counselors can use to tailor interventions (Tokzhigitova et al., 2025). Sector-specific guidance may likewise help students develop more realistic expectations about particular occupational pathways, as illustrated by research on nursing education in Bahrain (Tawash, 2023). Nevertheless, the digital evidence base remains relatively small, context-specific, and predominantly short-term. The reported reduction in choice mismatch should not be generalized as a pooled effect. Digital approaches also require adequate device access, connectivity, and digital literacy; without these conditions, technology may reproduce or widen existing inequities. Thus, the evidence supports digital diagnostics as a promising but still preliminary component of personalized career guidance.

4. Significance of Results and Scientific Contributions

The contribution of this review is to organize heterogeneous evidence along a single chain from program components to psychocareer mediators, transition indicators, and distal outcomes, and to show where that chain is well supported and where it is not. The evidence is strongest for proximal mediators (self-efficacy, adaptability, and goal clarity) and weakest for placement and graduation, which were reported less often and over short follow-up periods. The findings should be read as a map of the evidence rather than a quantification of effects, and they apply to the populations and contexts of the included studies.

5. Research Implications

Theoretically, the findings suggest that SCCT-based models for high school students could incorporate digitalization as a contextual factor, a proposition that future primary studies should test directly. Practically, the findings can inform the development of structured, evidence-informed career guidance curricula. For educational institutions, they highlight the need for professional training and digital assessment integration. For policymakers, the equity-related findings point to the value of targeted support for resource-limited schools, although the supporting evidence is largely indirect.

6. Research Limitations

This review has several limitations. First, the search was restricted to a single database (Scopus) and the 2015–2025 period, which may have resulted in database, publication, and time-window bias. Relevant studies indexed in ERIC, PsycINFO, Web of Science, or other sources, as well as grey literature, may therefore have been missed. Second, the available manuscript does not clearly document the language restriction, so the possibility of language bias cannot be evaluated. Third, the included studies were heterogeneous in design, measures, populations, and national contexts, and no meta-analysis was conducted; consequently, pooled effect sizes and direct quantitative comparisons are unavailable. Fourth, selective reporting cannot be ruled out because the review documentation does not report a formal assessment of reporting bias. Fifth, the

theory-based eligibility criterion and Q1–Q4 journal-tier screening may have excluded relevant interventions. Sixth, evidence concerning digital integration was concentrated in particular contexts, limiting generalizability. Finally, most studies used short follow-up periods of six months or less, which may be insufficient to establish long-term effects on placement and graduation. These limitations mean that the findings should be interpreted as an evidence map rather than as a definitive estimate of program impact.

F. CONCLUSION

This study examined the effectiveness of school-based career guidance programs for psychocareer mediators, academic transitions, and placement and graduation outcomes among high school students. Across the 20 included studies, well-designed programs that integrated psychoeducation, individualized feedback, career assessments, and reflective exercises were generally associated with improvements in students' self-efficacy, career adaptability, and goal clarity. These psychocareer mediators are plausibly important for informed academic and career decisions and for smoother transitions from high school to further education or the workforce (Milot-Lapointe & Arifouline, 2025; Jemini Gashi et al., 2023). The evidence for these proximal outcomes was more consistent than the evidence for distal outcomes: placement and graduation were reported less often and over shorter follow-up periods, so firm conclusions about them cannot yet be drawn.

Furthermore, digital tools such as gamified hidden assessments and sector-specific modules were reported to support the personalization of career guidance. They were associated with greater student engagement and with real-time data that can help tailor guidance to individual needs, and some studies reported fewer career-path mismatches (Tokzhigitova et al., 2025). The benefits of digital integration depend on whether students have equitable access to devices and connectivity.

While this review offers insight into the effectiveness of school-based career guidance, further research is needed to evaluate long-term impacts on placement and graduation. Longitudinal and tracer studies with comparison groups will help clarify how these programs influence students' academic and career trajectories over time (Wang et al., 2024).

Practical Implications

1. **Comprehensive Program Design:** Schools may consider multi-session career guidance programs that combine psychoeducation, reflective writing, career assessments, and individualized feedback, as these components were common in programs reporting favorable outcomes.
2. **Digital Integration:** Schools can consider incorporating digital tools, such as hidden assessments, into their career guidance programs while monitoring equity of access.
3. **Equity Considerations:** Policymakers should ensure that all students, particularly those in rural or under-resourced schools, have access to rigorous curricula and career guidance services.
4. **Teacher and Counselor Training:** Given the importance of delivering effective career guidance, schools should invest in professional development for both teachers and counselors.
5. **Long-Term Tracking and Evaluation:** Schools should track the long-term impact of career guidance programs, monitoring how these interventions influence students' post-graduation outcomes, including job placement and college enrollment.

Theoretical Implications

1. **Expansion of Theoretical Frameworks:** This research contributes to the theoretical understanding of career guidance by applying frameworks such as Social Cognitive Career Theory (SCCT), Career Construction Theory, and Cognitive Information Processing (CIP) in the context of high school

students.

2. Integration of Digital Tools: The study's findings highlight the potential of digital diagnostics in career guidance. Future research should explore how digital tools, such as gamified assessments and sector-specific information modules, can be integrated into existing theoretical models to improve career decision-making and reduce mismatch between students' skills and career paths.
3. Equity and Access: This research underscores the need for career guidance interventions to be responsive to the contextual factors that affect access to resources, such as socioeconomic background and geographical location.
4. Systematic Evaluation of Program Fidelity: The study highlights the importance of examining program fidelity and dose response relationships to determine the most effective combination of program components. Future theoretical work should explore how various delivery models group-based, one-on-one, and digital can be optimized for different student populations.

In conclusion, across 20 heterogeneous studies, school-based career guidance programs were generally associated with improvements in psychocareer mediators, particularly self-efficacy, career adaptability, and goal clarity. Evidence concerning academic transitions and distal outcomes such as placement and graduation was more limited because these outcomes were reported less frequently, followed for shorter periods, and examined using heterogeneous designs. A formal certainty rating was not conducted in the available review record; therefore, the overall certainty of evidence should be regarded as constrained rather than assigned an unsupported grade. Programs appear most promising when they integrate psychoeducation, reflective exercises, individualized feedback, and, where feasible, digital tools, while maintaining implementation quality, addressing equity barriers, and strengthening the professional capacity of teachers and counselors. These conclusions apply to the

populations and contexts represented in the included studies and should not be generalized beyond the available evidence. Future research should prioritize controlled and longitudinal designs that follow students through postsecondary transition, placement, and graduation, while directly testing the contribution of digital diagnostics and sector-specific guidance.

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