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A comprehensive study on the development and enhancement of career planning competencies among Chinese university students through integrative group counselling interventions

Yuqi Liu[1*], Patcharaporn Srisawat[2]

[1,2]*Department of Guidance and Educational Psychology, Faculty of Education, Srinakharinwirot University, Thailand*.

Corresponding author: Yuqi Liu (*Email: liu_yuqi677@hotmail.com*)

Abstract

This study aims to develop and validate a comprehensive model of career planning competencies and assess the effectiveness of an integrative group counseling intervention in enhancing these competencies among Chinese university students. A mixed-method research design was employed in two phases. In Phase 1, a quantitative, cross-sectional survey of 400 students from Yunnan Arts University was conducted using a Career Planning Questionnaire measuring six dimensions: self-cognition, social cognition, career cognition, career decision-making, career planning, and career implementation. Structural Equation Modeling (SmartPLS) was used for model testing. In Phase 2, a quasi-experimental design involved 20 low-scoring students, who received 8–10 sessions of integrative group counseling. Data were analyzed using paired t-tests, independent t-tests, and repeated measures ANOVA. Results from Phase 1 confirmed the model's validity and revealed strong interrelations among the six dimensions. Phase 2 findings demonstrated significant improvements in career planning competencies in the experimental group, sustained at follow-up, with large effect sizes. The paper provides a theoretical, empirical investigation of career planning development of Chinese university students in a six-dimensional model and a two-phase design with a combination of structural modeling with group counseling intervention. The results reveal that the model has very good predictive validity and that integrative counseling has long-term, unparalleled efficacy. The study emphasizes culturally appropriate, theory-based career guidance in college education to guide students on how to navigate the complex global labor market with clarity and confidence. This research contributes a culturally responsive and empirically validated model for career planning and introduces a structured counseling intervention suitable for Chinese higher education contexts. The study offers actionable insights for university counselors, educators, and policymakers aiming to enhance student career readiness through integrated psychological support.

Keywords: Career competencies, Career planning, Chinese university students, Integrative group counselling.

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1. Introduction

Career planning has become an important area of focus within higher education as students must now operate in a complex and competitive global workforce. Within the backdrop of rapid technological changes, changing labor structures, and transforming skill requirements, university students have to make strategic and well-informed decisions related to their future careers while still navigating issues of identity and self-development [1]. In nations such as China, where academic achievement has historically taken precedence over job readiness, holistic career development is a relatively new but growing trend [2]. But this change requires a remodelling of support systems, pedagogical strategies, and psychological interventions to prepare students not only academically but also professionally and emotionally for post-graduation transitions [3].

Schools are increasingly understanding the significance of providing students with career planning skills beyond employment placement services, including self-assessment, exploration of careers, decision-making, and implementation tactics [4]. As learners grapple with internal doubts and external pressures, the use of systematic guidance becomes decisive. In this context, the incorporation of counseling interventions, especially group-based and psychologically grounded models, has risen to prominence as a method for equipping students with the skills and attitudes needed to overcome career obstacles [5].

Empirical research on career planning and development has extensively explored the landscape of psychological, cognitive, and social factors influencing students' career trajectories [6-8]. A number of studies have highlighted the significance of self-knowledge, such as self-awareness of values, interests, and personality characteristics, in informing career choices [7-11]. For example, Lin et al. [3] discovered that Chinese university students whose self-concept clarity is higher are more prone to practicing proactive career exploration behavior. Social cognition has also been found to be crucial, specifically in collectivistic cultures like China, where parental influence, peer influence, and social expectations all help determine students' career choices [12].

Career awareness, or students' knowledge of the world of work and how it can relate to their personal qualities, is also a topic that has been empirically confirmed. A study by Fitzpatrick et al. [13] confirmed that exposure to career information through workshops or mentorship activities is associated with career decision-making self-efficacy among students. In addition, career choice-making itself has been studied as a separate construct, with some researchers observing its linkage to decision-making self-efficacy and low levels of anxiety [14]. The value of planning and implementation for career-turning decisions into action plans has also been established, with researchers stating that students who are skilled at planning are better prepared for employment and have more seamless school-to-work transitions [15].

2. Literature Review

2.1. Theoretical Foundations

Career planning has been a central interest of vocational psychology for many years, offering a systematic procedure by which individuals find, explore, and enact career aims [11]. One of the earliest theories in this area is Donald Super's Career Development Theory, which presents the concept of career development as a continuous process influenced by self-concept and changing life roles. Super's Life-Span, Life-Space theory states that individuals go through a sequence of five career stages: Growth, Exploration, Establishment, Maintenance, and Disengagement, each with specific career tasks and choices [16]. The self-concept is at the core of this model, and it evolves through personal experiences, social interactions, and educational experiences [17]. Super's model emphasizes that effective career planning is essential to ensure that career choices align with a realistic and evolving understanding of oneself, which is continually redefined as individuals navigate successive life phases and adapt to changing circumstances.

Eli Ginzberg and his associates developed Ginzberg's Career Stages Theory, which also provides significant findings related to the career planning process by determining its developmental nature. Ginzberg identifies three general phases: Fantasy (up to age 11), Tentative (ages 11–17), and Realistic (ages 17–early 20s), representing a progression from whimsical dreams to more realistic goal-setting and planning. The theory emphasizes that career selection is not an instantaneous process but a step-by-step development guided by individual values, societal expectations, and experiential learning. Compared to these developmental models, the Trait-Factor Theory of Frank Parsons is complementary, highlighting the importance of matching an individual's characteristics—such as ability, interests, and personality—with occupational factors. Within this framework, career satisfaction and success are most likely achieved when there is an

optimal fit between an individual's attributes and the demands of a specific vocation. Although less dynamic than developmental theories, Trait-Factor Theory has played a significant role in influencing aptitude testing and career guidance, especially through the use of psychometric instruments to facilitate informed decision-making.

2.2. Components of Career Planning

Career planning is a multifaceted process that involves the interplay of several cognitive and behavioral factors that guide individuals from career awareness to career implementation [18]. Behind it is self-cognition, or an individual's knowledge of his or her own personal attributes, values, interests, and objectives [19]. Self-cognition plays a pivotal role in the development of a stable and realistic career identity and is a precursor to sound career decision-making [20]. Social cognition completes this image by encompassing the manner in which individuals view, construe, and respond to social influences such as family pressures, peer norms, and cultural values [21]. Self and social cognition are both crucial in informing career aspirations and beliefs concerning potential occupational careers. Career knowledge, however, includes one's familiarity with and knowledge of various occupations, trends in the job market, and required qualifications or skills [22]. Higher career awareness helps students to broaden their career possibilities and make informed comparisons between a range of occupational possibilities [23].

These mental processes form the basis for career choice, career planning, and career execution, which are the behavioral aspects of career formation [13]. Career choice involves considering career opportunities and selecting a suitable career path according to one's self-concept, values, and life goals [9]. It not only requires cognitive rationality but also emotional readiness and supportive processes enabling trust in the chosen decisions [1]. Career planning then involves making decisions followed by actions, such as setting short- and long-term career goals, attending appropriate training or schooling, and developing an action plan to advance one's career [14]. Lastly, career implementation is the actualization of these plans in practice, involving work searching, utilization of one's abilities, and workplace adaptation [15]. While it does attempt to capture the dynamic process of career development, as new experiences are faced, goals are re-evaluated, and changes are incorporated accordingly [24]. Combined, they emphasize the importance of an integrated approach to career planning, which involves the integration of personal insight, social understanding, well-educated decision-making, and proactive control of one's career.

2.3. Integrative Group Counseling

Integrative group counseling is an inclusive model of treatment that combines processes and strategies from a range of counseling theories to respond to the diversity of members' needs [6]. As a career development model, it is highly effective because it makes it possible to integrate cognitive, affective, and behavioral interventions within a supportive, communal atmosphere [10]. Two of the most commonly used foundational approaches that are most often integrated into group counseling are Rational Emotive Behavior Therapy (REBT) and person-centered therapy. REBT was created by Albert Ellis to assist clients in becoming aware of and modifying irrational thinking patterns that impede personal and professional growth [25-27]. In a group, REBT assists members in battling unproductive beliefs about themselves, reducing anxiety in career choices, and developing more productive thought processes [23]. Carl Rogers' person-centered counseling, on the other hand, emphasizes empathy, unconditional positive regard, and genuineness, providing a warm setting for students to discuss their career aspirations, values, and anxieties [21]. The integrative model can also incorporate solution-oriented, narrative, and cognitive-behavioral methods to address various emotional and developmental needs, thereby enhancing personal capacity and decision-making abilities [12].

Application of integrative group guidance in career development has been accorded increased priority for its varied benefits [15]. It provides a space for people to share career struggles, receive constructive criticism, and learn from others in similar transitional stages, such as university students [28]. The dynamics of the groups provide a unique experience of emotional support and social learning, leading to a sense of similarities and a reduction of isolation characteristic of career bewilderment [29]. Group counseling enhances career skills such as action planning, self-efficacy, and goal setting. Experiential activities, reflective conversations, and cognitive restructuring assist participants in developing career adaptability and resilience [24]. Empirical evidence indicates that integrative group counseling reduces decision-making anxiety, enhances career clarity, and boosts career motivation [30]. Integrating various therapeutic paradigms facilitates counselors in designing interventions to overcome both psychological obstacles and instrumental skills required for career execution. This flexibility makes the strategy especially appropriate for heterogeneous university populations with complex career environments.

2.4. Empirical Studies in China

Over the past decade, Chinese empirical studies have predominantly focused on the role of career counseling interventions in the development of career planning capabilities among university students. Most of these interventions are narrow and superficial in scope [2]. Still, a majority of Chinese universities' career guidance programs continue to depend on lecture-oriented formats and single-instance career lectures without interactive and developmental elements [7]. These conventional approaches fail to account for the psychological preparedness or emotional ambivalence that students are likely to experience when making career decisions [31]. Furthermore, today's career guidance services often endorse Western models without sufficient adaptation to local conditions, which creates a disconnection between students' real needs and the counseling content or manner [26]. Absence of qualified career counselors and superficial deployment of psychological theories into real-world interventions further limit the effectiveness of current programs [14]. Therefore,

although students may learn surface-level information regarding careers, they tend to have difficulty with more in-depth areas of career planning, such as self-exploration, regulation of motivation, and confidence in decision-making.

With these constraints, there is an urgent need for a local, realistic model of career intervention that fits the socio-cultural reality of Chinese university students. Integrative group counseling is a suitable alternative since it can be easily adapted and culturally responsive [26]. It has been evidenced that Chinese students are prone to espouse group belongingness and peer relationships; therefore, group counseling is an appropriate cultural intervention to advance career development [12]. Also, in context, integrative counseling can act as a bridge between models and practical application by transcending cognition to the emotional domain of career planning [32]. It also provides the potential to include collectivist values, family obligations, and social concordance cultural factors highly ingrained within Chinese society within the counseling framework [33]. Local models can guarantee that interventions are not just theoretically grounded but also pragmatically successful, endowing students with the skills and self-belief to cope with ever more competitive labor markets [27]. Empirical research must therefore continue to examine and develop these strategies, paving the way for sustainable, evidence-based career development practices in China.

2.5. Conceptual Framework and Hypotheses Development

This study is grounded in a comprehensive conceptual model that outlines the interdependence among six significant career planning dimensions, i.e., self-cognition, social cognition, career cognition, career decision-making, career planning, and career implementation. The above dimensions collectively represent the cognitive, social, and behavioral facets that aid individuals in navigating the complex process of formulating and implementing career decisions. Self-knowledge, such as self-awareness of interests, values, and abilities, forms the basis on which social knowledge, or perceptions of family and societal expectations, is built. Both then influence career knowledge, or awareness and understanding of occupational options and labor market demands. These foundations guide career decision-making, where individuals evaluate alternatives and select the options most aligned with their aspirations. Career planning translates these decisions into structured objectives and action plans, leading to career implementation, where plans are realized through specific actions such as education, training, or job hunting. Due to the interdependent and dynamic nature of these dimensions, effective interventions must address multiple areas simultaneously to develop overall career competence [1]. In this direction, integrative group counseling is a highly effective instrument of change through the deployment of various modes of treatment, such as Rational Emotive Behavior Therapy (REBT), person-centered therapy, and cognitive-behavioral methods, to overcome psychological issues and increase self- and social-perceptiveness [34]. The group modality not only facilitates peer learning and emotional support but also promotes experiential learning that enhances cognitive restructuring, decision-making competence, and goal-setting, thereby supporting overall development across the six domains. Guided by this model, three general hypotheses direct the study of the effectiveness of integrative group counseling in strengthening career planning skills among Chinese university students.

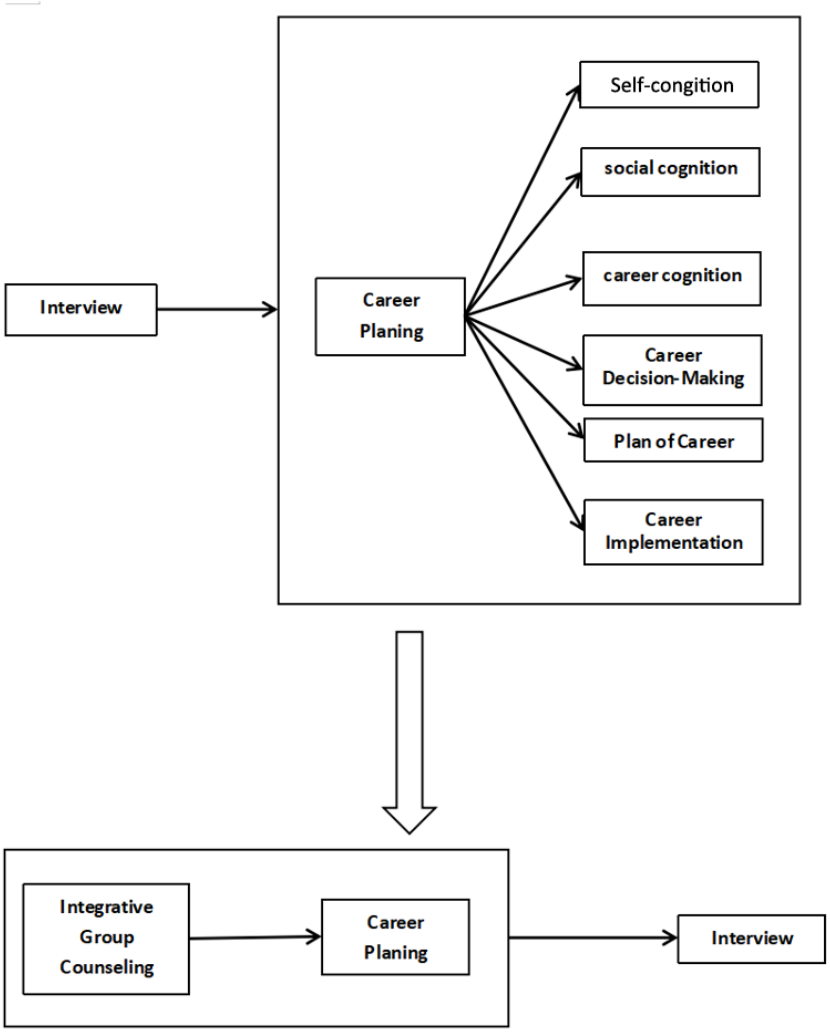

Figure 1.
Conceptual Framework.

3. Methodology

The study was conducted in two phases to develop and test a model of career planning competencies and evaluate the effectiveness of an integrative group guidance program. A cross-sectional survey design was employed quantitatively in Phase 1 to investigate correlations among six career planning dimensions: self-cognition, social cognition, career cognition, career decision-making, career planning, and career implementation. This format facilitated the collection of data at one point in time to enable a thorough statistical analysis of the form and validity of the model submitted.

Data for Phase 1 were chosen according to stratified random sampling to ensure proper representation in terms of academic discipline, period of study, and gender among students of Yunnan Arts University. A sample of 400 students was involved in this phase to obtain a reliable sample for the development of the model. The data collection tool was a well-designed Career Planning Questionnaire containing items that addressed each of the six dimensions established in the literature and conceptual framework. The questionnaire was piloted and reviewed by experts to verify clarity, cultural appropriateness, and content validity prior to administration.

Data collection was conducted using self-reporting surveys administered both in class in paper form and electronically on university platforms. Voluntary participation was ensured, and confidentiality was maintained so that respondents provided candid and genuine answers. The data were analyzed with the help of SmartPLS software, which is suitable for structural equation modeling with latent, multi-dimensional constructs. The reliability of the measurement scales was examined through Cronbach's Alpha and Composite Reliability, while convergent validity was assessed through Average Variance Extracted and outer loadings. Multicollinearity between indicators was tested using Variance Inflation Factor scores for independence among constructs. Discriminant validity was established with the Fornell-Larcker criterion as well as the Heterotrait-Monotrait ratio. The overall model fit was evaluated using the Standardized Root Mean Square Residual, while R^2 and Q^2 values were used to determine explained variance and predictive relevance, respectively. Lastly, path analysis was employed to examine the hypothesized relationships between the reflective constructs in the model.

Phase 2 utilized a quasi-experimental design with pre-test, post-test, and follow-up measurements to assess the efficacy of an integrative group counseling program. Two groups were involved in this phase: an experimental group receiving the counseling program and a control group that was not given any formal intervention within the study duration. Twenty

students who scored low on the Career Planning Questionnaire in Phase 1 were purposively selected and randomly assigned to the two groups to examine the intervention's impact on improving career planning competencies.

The intervention consisted of an 8 to 10-session integrative group guidance program specifically designed to address the six career planning dimensions. Based on Rational Emotive Behavior Therapy, person-centered therapy, and cognitive-behavioral strategies, the program included reflective exercises, group discussions, decision-making workshops, goal-setting exercises, and implementation planning in practice. The group program ensured peer support and experiential learning opportunities, aiming to improve self-awareness, social cognition, career knowledge, and decision-making abilities holistically.

The Phase 1 validated Career Planning Questionnaire was completed by participants at three times: prior to the intervention, upon completion, and at a follow-up time (usually 1 to 2 months later). These time point data were compared statistically using paired t-tests to determine within-group change, independent sample t-tests to contrast experimental and control groups, and repeated measures ANOVA to explore the interaction of time and group with respect to career planning competencies. This rigorous analytic strategy allowed the study to both determine immediate gains and assess the long-term stability of counseling effects.

4. Results

4.1. Phase 1: Smart PLS Model Results

Table 1 provides descriptive statistics for the six key dimensions of career planning competencies measured among 400 university students. The mean scores across dimensions indicate generally moderate to high levels of perceived competency, with Career Cognition having the highest mean score (M = 3.90, SD = 0.55), suggesting that students felt relatively confident in their understanding and awareness of career options and requirements. Self-Cognition and Career Planning also displayed relatively strong mean values (M = 3.85 and M = 3.75, respectively), indicating a healthy degree of self-awareness and planning ability among participants. In contrast, Career Decision-Making had the lowest mean (M = 3.60, SD = 0.70), suggesting that students may experience more difficulty or uncertainty when making concrete career-related choices. The standard deviations across the six dimensions are all below 1.0, indicating low to moderate variability in responses. The range between minimum and maximum values across all variables confirms that the full scale was utilized by respondents. Skewness and kurtosis values are all within acceptable ranges (±1), supporting the assumption of approximate normal distribution for each variable. Slight negative skewness for most dimensions (e.g., Career Cognition: -0.40) implies a tendency toward higher scores, which may reflect positive self-perceptions of career readiness. These findings offer a robust basis for subsequent multivariate analysis using SmartPLS [35].

Table 1.
Descriptive Statistics of Career Planning Dimensions (N=400).

Dimension	Mean	SD	Min.	Max.	Skewness	Kurtosis
Self-Cognition	3.85	0.62	2.0	5.0	-0.25	0.05
Social Cognition	3.74	0.69	1.8	5.0	-0.10	-0.30
Career Cognition	3.90	0.55	2.2	5.0	-0.40	0.10
Career Decision-Making	3.60	0.70	1.5	5.0	0.15	-0.45
Career Planning	3.75	0.65	2.0	5.0	-0.20	-0.10
Career Implementation	3.68	0.67	1.8	5.0	0.05	-0.20

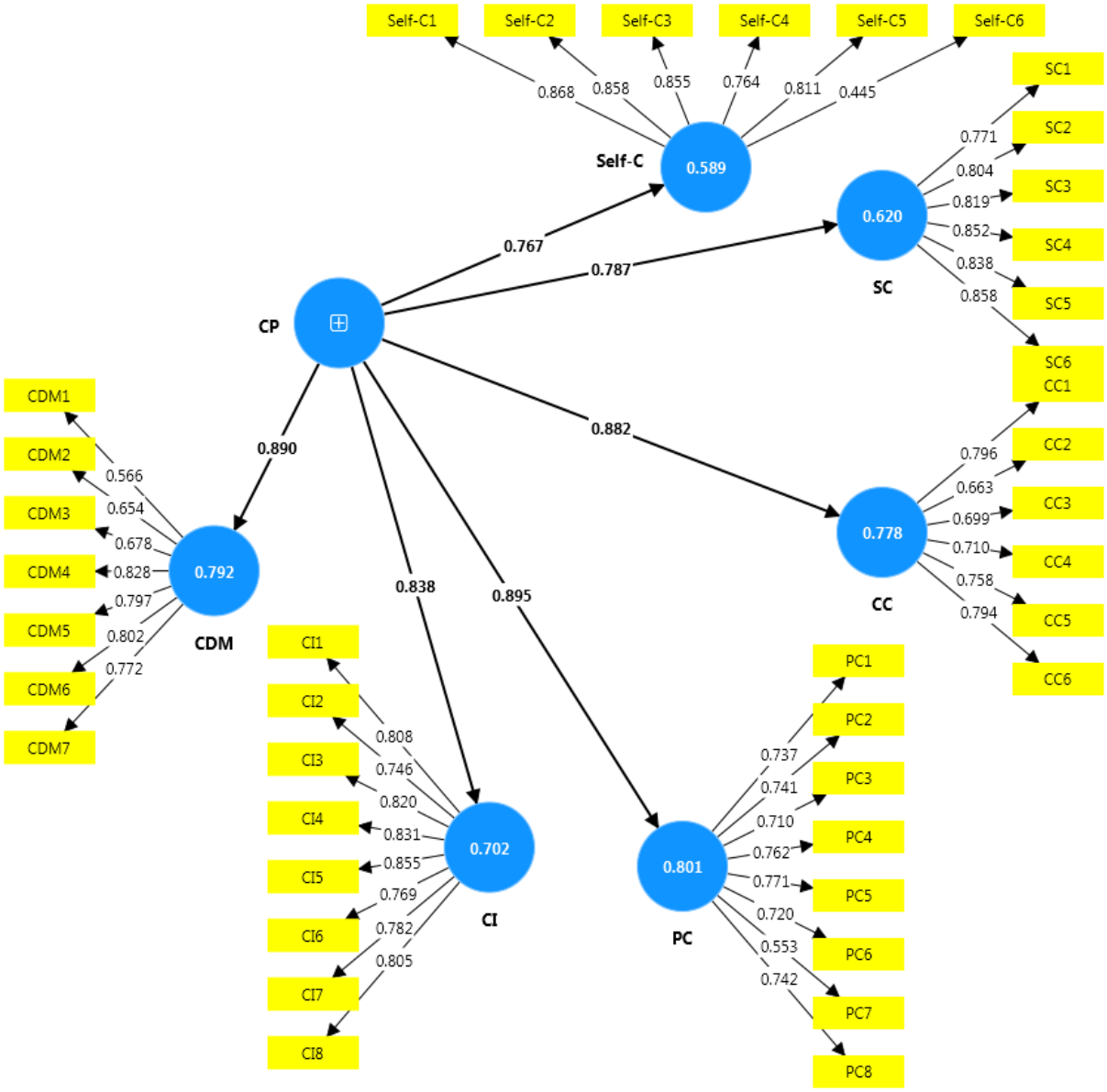

Figure 2.
Measurement Model.

Table 2 and Figure 2 presented here are the results of the outer model assessment, including factor loadings, internal consistency reliability (Cronbach's Alpha and Composite Reliability), and convergent validity (Average Variance Extracted, AVE) for the six latent constructs of career planning. The outer loadings for most items exceeded the acceptable threshold of 0.70, indicating that individual items strongly represent their respective constructs. However, a few items (e.g., CDM1 = 0.566, CC2 = 0.663, PC7 = 0.553, and Self-C6 = 0.445) fall below this threshold. While one or two low-loading items can be retained for theoretical relevance, they may be reconsidered in future model refinement to improve construct reliability. The Cronbach's Alpha values for all constructs range from 0.833 to 0.921, exceeding the minimum recommended value of 0.70, which indicates strong internal consistency among the items within each dimension. Similarly, the Composite Reliability (CR) scores are well above the 0.70 threshold, further confirming construct reliability. Regarding convergent validity, all AVE values are above or equal to the 0.50 threshold, confirming that each construct accounts for over 50% of the variance in its indicators. These findings support the measurement model and confirm that the constructs of career cognition, decision-making, implementation, planning, social cognition, and self-cognition are reliable and valid for structural model analysis.

Table 2.
Outer Model Results (Reliability and Validity).

Variables	Items	Outer Loading	Cronbach's Alpha	CR	AVE
Career Cognition	CC1	0.796	0.833	0.877	0.545
	CC2	0.663			
	CC3	0.699			
	CC4	0.710			
	CC5	0.758			
	CC6	0.794			
Career Decision-Making	CDM1	0.566	0.854	0.889	0.538
	CDM2	0.654			
	CDM3	0.678			
	CDM4	0.828			
	CDM5	0.797			
	CDM6	0.802			
	CDM7	0.772			
Career Implementation	CI1	0.808	0.921	0.935	0.644
	CI2	0.746			
	CI3	0.820			
	CI4	0.831			
	CI5	0.855			
	CI6	0.769			
	CI7	0.782			
	CI8	0.805			
Career Planning	PC1	0.737	0.866	0.895	0.518
	PC2	0.741			
	PC3	0.710			
	PC4	0.762			
	PC5	0.771			
	PC6	0.720			
	PC7	0.553			
	PC8	0.742			
Social Cognition	SC1	0.771	0.906	0.927	0.680
	SC2	0.804			
	SC3	0.819			
	SC4	0.852			
	SC5	0.838			
	SC6	0.858			
Self-Cognition	Self-C1	0.868	0.860	0.901	0.610
	Self-C2	0.858			
	Self-C3	0.855			
	Self-C4	0.764			
	Self-C5	0.811			
	Self-C6	0.445			

Table 3 shows the Heterotrait-Monotrait Ratio (HTMT) values used to assess discriminant validity among the six constructs of career planning: Career Cognition, Career Decision-Making, Career Implementation, Career Planning, Social Cognition, and Self-Cognition. Discriminant validity is established when constructs are empirically distinct from one another and according to Henseler et al. [8], HTMT values below 0.90 are generally considered acceptable. All HTMT values in this table are below the 0.90 threshold, confirming that each construct is empirically unique and not overly correlated with the others. For example, the HTMT value between Career Cognition and Career Decision-Making is 0.779, and between Career Implementation and Career Planning is 0.762, both within acceptable limits. The lowest HTMT value appears between Career Cognition and Career Planning (0.516), indicating a moderate association but clear conceptual separation. Meanwhile, higher values such as 0.787 (Social Cognition and its related constructs) still remain within the acceptable range, showing healthy differentiation without redundancy.

Table 3.
Discriminant Validity (HTMT).

	CC	CDM	CI	PC	SC	Self-C
Career Cognition						
Career Decision-Making	0.779					
Career Implementation	0.685	0.700				
Career Planning	0.516	0.611	0.762			
Social Cognition	0.732	0.693	0.621	0.690		
Self-Cognition	0.677	0.726	0.701	0.663	0.578	

Table 4 presents the results of the structural model, emphasizing the coefficient of determination (R^2), predictive relevance (Q^2), and path coefficients (β), along with corresponding t-values and p-values for each endogenous variable in the SmartPLS model. These indicators offer insights into the model's explanatory power, predictive validity, and the strength of relationships among constructs. The R^2 values for all six career planning dimensions range from 0.589 to 0.801, indicating moderate to substantial explanatory power (Hair et al., 2019). For example, Career Planning ($R^2 = 0.801$) and Career Decision-Making ($R^2 = 0.792$) demonstrate that a high proportion of variance in these constructs is explained by the predictor variables. Career Cognition ($R^2 = 0.778$) and Career Implementation ($R^2 = 0.702$) also show strong predictive strength, supporting the overall coherence of the model. The Q^2 values, all exceeding 0.5, confirm the strong predictive relevance of the constructs using blindfolding procedures, validating that the model has practical forecasting ability beyond the sample. Regarding path coefficients (β), all relationships are positive and statistically significant ($p < 0.001$), with very high t-values, demonstrating robust effects. The highest β value is observed for Career Planning ($\beta = 0.895$), indicating that its predictor(s) exert a very strong positive influence. Similarly, Career Decision-Making ($\beta = 0.890$) and Career Cognition ($\beta = 0.882$) are strongly influenced by their respective independent variables. These results affirm the hypothesized model paths and reinforce the structural integrity and empirical strength of the career planning competency framework.

Table 4.
Inner Model Results – R^2, Q^2, and Path Coefficients.

Dependent Variable	R^2	Q^2	Predictor(s)	β)	t-value	p-value
Career Cognition	0.778	0.774	Career Cognition	0.882	34.896	0.000
Career Decision-Making	0.792	0.786	Career Decision-Making	0.890	37.739	0.000
Career Implementation	0.702	0.699	Career Implementation	0.838	17.711	0.000
Career Planning	0.801	0.795	Career Planning	0.895	39.820	0.000
Social Cognition	0.620	0.613	Social Cognition	0.787	14.218	0.000
Self-Cognition	0.589	0.579	Self-Cognition	0.767	12.274	0.000

4.2. Phase 2: Quasi-Experimental Results

Table 5 presents the within-group analysis of the experimental group's career planning scores across three time points: pre-intervention, post-intervention, and follow-up (after two months). The results reveal a substantial and statistically significant improvement in career planning competencies following the integrative group counseling intervention. The mean score increased from 2.85 (SD = 0.40) at pre-test to 3.70 (SD = 0.35) post-test, representing a large gain in perceived career planning ability. The paired-sample t-test for pre- and post-intervention scores yielded a t-value of 8.42 ($p < 0.001$), indicating a highly significant improvement due to the intervention. Importantly, the follow-up mean score ($M = 3.60$, $SD = 0.38$) remained consistently high, only slightly lower than the post-test value. The t-test comparing post-test to follow-up showed no significant decline ($t = 1.12$), suggesting that the positive effects of the intervention were sustained over time. This long-term retention of gains underscores the effectiveness and durability of the integrative group counseling approach in enhancing career planning competencies among students with initially low scores. These findings strongly support the hypothesis that structured, psychological counseling interventions can foster meaningful and lasting improvements in career development skills.

Table 5.
Within-Group Comparison of Career Planning Scores (Experimental Group, N=10).

Time Point	Mean Score	SD	Paired t-test (Pre vs Post)	t-value	p-value	Paired t-test (Post vs Follow-up)	t-value	p-value
Pre-Intervention	2.85	0.40						
Post-Intervention	3.70	0.35	Significant Improvement	8.42	<0.001			
Follow-up (2 months)	3.60	0.38				No Significant Decline	1.12	

Table 6 presents the within-group analysis for the control group, which did not receive the integrative group counseling intervention. The results show minimal change in career planning scores over the three time points: pre-intervention, post-intervention, and follow-up. The mean score slightly increased from 2.90 (SD = 0.42) at pre-test to 2.95 (SD = 0.45) post-test. However, this difference was statistically non-significant, as reflected in the paired t-test result (t =

0.82, p = 0.43). Similarly, the follow-up score of 2.92 (SD = 0.44) showed no significant change when compared with the post-test score (t = 0.39, p = 0.70), further confirming the lack of improvement or development in career planning competencies in the absence of intervention. These findings indicate that, without targeted guidance or structured support, students with low initial career planning skills do not show natural or spontaneous improvement over time.

Table 6.
Within-Group Comparison of Career Planning Scores (Control Group, N=10).

Time Point	Mean Score	SD	Paired t-test (Pre vs Post)	t-value	p-value	Paired t-test (Post vs Follow-up)	t-value	p-value
Pre-Intervention	2.90	0.42						
Post-Intervention	2.95	0.45	Not Significant	0.82	0.43			
Follow-up (2 months)	2.92	0.44				Not Significant	0.39	0.70

Table 7 compares the career planning scores of the experimental and control groups at three time points: pre-intervention, post-intervention, and follow-up. At pre-intervention, the mean scores for the experimental group (M = 2.85, SD = 0.40) and the control group (M = 2.90, SD = 0.42) were not significantly different (t = -0.39, p = 0.70), and the effect size was negligible (Cohen's d = 0.13), confirming the equivalence of both groups before the intervention. However, post-intervention scores reveal a marked difference. The experimental group's mean rose to 3.70 (SD = 0.35), while the control group's mean was only 2.95 (SD = 0.45). The independent t-test indicates this difference is highly significant (t = 5.12, p < 0.001) with a large effect size (Cohen's d = 1.78). At follow-up, the experimental group maintained a significantly higher mean score (3.60 vs. 2.92), again with a highly significant t-value (t = 4.67, p < 0.001) and a large effect size (Cohen's d = 1.59). These findings demonstrate the clear and sustained impact of the integrative group counseling intervention on career planning development. The large effect sizes confirm not only statistical significance but also practical significance, underscoring the intervention's transformative role in enhancing career competencies compared to no intervention.

Table 7.
Between-Group Comparison of Career Planning Scores.

Time Point	Experimental Group Mean (SD)	Control Group Mean (SD)	Independent t-test t-value	p-value	Cohen's d (Effect Size)
Pre-Intervention	2.85 (0.40)	2.90 (0.42)	-0.39	0.70	0.13 (negligible)
Post-Intervention	3.70 (0.35)	2.95 (0.45)	5.12	<0.001	1.78 (large)
Follow-up (2 months)	3.60 (0.38)	2.92 (0.44)	4.67	<0.001	1.59large)

5. Discussion

The journey to a fulfilling career is not a chain of isolated decisions but an intricate process of growth that depends on personal consciousness, social situation, and informed planning. In the developing learning environment of China, where students are confronted by a changing work environment and evolving social needs, the need for organized and evidence-based career guidance has never been greater [13]. The research aimed to disentangle the dynamics of career development among university students by developing a validated theoretical model and examining the effectiveness of integrative group counseling interventions. Using a two-stage mixed-method design, this study provides a detailed portrayal of how key competencies such as self-cognition, decision-making, and implementation cross professional boundaries and how these can be encouraged through organized psychological interventions [36]. The findings have theoretical significance and practical applications, and they demonstrate development processes capable of guiding young adults toward fulfilling career paths.

Phase 1 results strongly support the construct validity and validity of the proposed career planning model among Chinese university students. The model demonstrated high reliability and validity figures, indicating that the six dimensions of self-cognition, social cognition, career cognition, career decision-making, career planning, and career implementation are well-defined and quantifiable constructs in this cultural setting [37]. The high path coefficients indicated a clear and coherent sequential pattern among these dimensions, highlighting the processual quality of career development [9]. In particular, the initial functions of self-cognition and social cognition underscore how students' social awareness and self-comprehension play crucial roles in their learning of career knowledge. This agrees with earlier theoretical frameworks emphasizing that both internal self-analysis and external social pressures are engaged in shaping career direction.

Besides, the high correlations observed from career cognition to decision-making, and subsequently from decision-making to planning and implementation, signify the level stages on which knowledge and plans are translated into real career actions [21]. The observation confirms the argument that career development is cumulative, with each stage reinforcing the previous one to produce effective planning and action. The comparatively high explanatory strength of the model suggests that the six dimensions of the model validly measure the core competencies involved in career planning [30]. This stage thus provides a solid empirical foundation for conceptualizing career growth as a multidimensional construct grounded in cognitive, affective, and behavioral components.

The quasi-experimental results in Phase 2 provide robust evidence of the effectiveness of the integrative group counseling intervention on the improvement of career planning skills. The experimental group had a statistically significant and clinically meaningful career planning score gain following the intervention, and the gains were maintained at the two-month follow-up. The control group did not show any significant change, thus suggesting that changes stemmed from the intervention rather than from external factors or natural time drift [13]. Large effect sizes also drive the practical value of the results, confirming that the counseling program worked in a way that supported significant improvement in students' career competencies. The continuation of the positive results at follow-up also speaks to the intervention's ability to create long-term changes in cognitive and behavioral components of career planning. It indicates that the integrative guidance model based on cognitive-behavioral, person-centered, and rational emotive behavioral methods successfully targets the multigeneric demands of career-formation students [19]. The group modality likely reinforced the impact of the intervention through peer interaction, social support, and mutual learning, all of which are important in solidifying new skills and beliefs. Generally, these findings suggest that integrative group counseling is a strong tool for enhancing career planning processes at the university level.

The findings in this study validate and extend conventional theories of career development. Self-cognition's role is consistent with Super's Career Development Theory, where changing self-concept is central to career maturity. Similarly, the progression from career cognition to decision-making and implementation accurately parallels Ginzberg's stages of career development, thereby validating the concept of staged but ongoing career development [18]. The emphasis of the trait-factor theory on matching individual characteristics and work requirements is also reflected in the salience of self- and social cognition as antecedents to career knowledge and decisions. This research extends these theories by theorizing an equilibrium, evidence-based model that synthesizes multiple components within a contextualized cultural platform [29]. The successful outcomes attributed to integrative group counseling also overcome the theory-practice gap, illustrating that theoretical ideas can be implemented through evidence-based interventions. The integration of this approach also demonstrates the synergy of cognitive, affective, and social processes occurring in unison to facilitate career development, which implies that integrated approaches yield more successful outcomes compared to single approaches.

The findings underscore that career planning is not a step-by-step decision-making process but a dynamic, cyclical interaction of social and cognitive processes. The role of social cognition highlights how students' social perceptions of expectations, peers, and family influence their career information and decisions [14]. This also holds true in Chinese culture, as collectivist cultural norms prevailing in China support relational and social harmony. The explanatory strength of career decision-making with regard to planning and implementation suggests the way in which decision-making serves as a juncture point to translate knowledge into action plans and behavior [38]. Such areas of focus emphasize the necessity of recognizing career planning as a comprehensive process where self-knowledge, social context, acquiring knowledge, and decision-making are highly interrelated. This combined approach enhances the explanatory power of the model and provides a more nuanced view of how students come to master the complexities of career construction in an increasingly dynamic social and economic context.

The long-term effectiveness of the integrative group career counseling intervention demonstrates the power of multidimensional treatment approaches in developing career skills. By combining rational emotive behavior therapy (REBT) elements [34], person-centered therapy, and cognitive-behavioral strategies [25], the intervention both confronts cognitive distortions and dysfunctional cognition and provides a space for affect expression and self-exploration. The combined intervention was anticipated to remove internal career planning obstacles, including anxiety, ambivalence, and lack of self-efficacy, and at the same time equip students with the required abilities. Moreover, the group setting promoted social learning, normalization of career concerns, and peer support, which have been shown to enhance motivation and change commitment. These mechanisms may explain why participants were able to maintain gains beyond the intervention period, suggesting that the intervention empowered students to independently manage and advance their career development post-counseling.

In summary, this research provides a systematic and empirically based account of the career planning development of Chinese university students, highlighting the importance of integrated cognitive and social processes and successful intervention strategies. The Phase 1 model provides clear definitions of the key dimensions and how they relate to each other, and Phase 2's intervention outcomes assure that some counseling has the effect of dramatically improving these skills in the long term. Together, the results offer a strong theoretical and empirical base for subsequent program development and research to assist the career growth of student clientele in multicultural environments. Where theory, measurement, and intervention converge, it reflects the emphasis placed on comprehensive, context-specific ways of career planning.

6. Conclusion

This research provides a thorough and empirically based investigation of Chinese university students' career planning development, incorporating a theory-building model establishment with intervention effectiveness assessment. By examining and verifying a six-dimensional model including self-cognition, social cognition, career cognition, decision-making, planning, and implementation, the study depicts the whole process of career development. Combining SmartPLS-based structural modeling in Phase 1 and quasi-experimental group counseling intervention in Phase 2 permitted a strong test of both conceptual relationships as well as applied outcomes. The findings establish not only internal consistency and predictive power of the model but also substantial and long-term effects of integrative group counseling on improving students' career planning skills. This supports the need for comprehensive, culturally relevant career guidance practices within higher education. With China still evolving to changes in the global labor market, such evidence-based practices will become critical to equipping students to move forward with uncertainty, clarity, agency, and purpose. In totality, this study

provides valuable contributions to both career development theory and practice, presenting a reproducible model and intervention framework that can guide subsequent academic research and institutional development.

6.1. Implications

The practical implications of the study are important to educational institutions, career guidance counselors, and policymakers interested in improving career development services in higher education, especially in the Chinese setting. The supported six-dimensional career planning model is a clear framework that can be translated into programmatic interventions and targeted programs. Career services offices can create assessment measures and development workshops based on these six domains: self-cognition, social cognition, career cognition, decision-making, planning, and implementation, to comprehensively assess and nurture student development. The success of the integrative group counseling program demonstrates the efficacy of multi-session, theory-based interventions that integrate cognitive-behavioral, person-centered, and rational-emotive methods. Institutions may implement similar group-based counseling models as affordable, scalable options that maximize student participation, peer learning, and long-term skill retention. Furthermore, early identification of students with low career planning competence using the model's framework enables early intervention and customized guidance. This study, therefore, presents a replicable and flexible approach to enhancing student preparedness for an increasingly complex and competitive labor market.

Theoretically, the current research provides a significant contribution to the career development field by presenting an integrative model that synthesizes classical and contemporary theories within a culturally based framework. Building on Super's stages of development, Ginzberg's decision-making theory, and the trait-factor theory, the six-dimensional model integrates major psychological and behavioral elements into a systematic structure. It broadens previous theories with empirical confirmation of the interdependences among cognitive, affective, and action-oriented career planning processes in a non-Western context, thus enhancing the cross-cultural applicability of the model. Additionally, the research introduces a new application of integrative group counseling to operationalize theory constructs and promote change measurability, which is an important practical approach to bridging theory and practice. The results show that counseling interventions not only facilitate immediate career decision-making but also reinforce long-term planning and implementation behaviors, underscoring the significance of dynamic, process-oriented models. Empirical support for the sequence and interplay among career development stages, the study enhances theoretical debate and lays the groundwork for eventual model refinement and comparative cross-cultural studies.

6.2. Limitations and Future Directions

Despite the high value of the contributions of this study, there are some limitations that, in turn, offer opportunities for future research. First, the sample was recruited solely from Yunnan Arts University, which may limit the generalizability of the findings to other student populations, particularly those in different fields of study, locations, or cultures. Future studies should expand the sample size and diversity and evaluate the model's applicability to broader educational contexts. Second, the quasi-experimental design, while convenient, did not involve random assignment, which, although efforts were made to match control and experimental groups, could have introduced selection bias. Randomized controlled trials would strengthen causal inferences in future research. Additionally, the follow-up period was relatively short (two months), raising questions about the long-term sustainability of counseling effects. Future studies could employ longitudinal designs to assess the durability of intervention outcomes over extended periods. Moreover, although the integrative group counseling model was effective, this study did not isolate the specific impacts of different therapeutic components (e.g., REBT versus person-centered interventions). Comparative studies examining the efficacy of individual counseling modalities could inform best practices in intervention design. Finally, incorporating qualitative methods such as interviews or focus groups in future mixed-method studies could provide deeper insights into personal experiences and contextual variables related to career development, thereby enriching the interpretation of quantitative data.

References

[1] M. Banerjee, S. Biswas, P. Roy, S. Banerjee, S. Kunamaneni, and A. Chinta, "Does career planning drive agri-entrepreneurship intention among university students?," *Global Business Review*, vol. 26, no. 1, pp. 7-23, 2025. https://doi.org/10.1177/0972150920961266

[2] K. Dai and T. Pham, "Graduate employability and international education: An exploration of foreign students' experiences in China," *Higher Education Research & Development*, vol. 43, no. 6, pp. 1227-1242, 2024. https://doi.org/10.1080/07294360.2024.2325155

[3] C. Lin *et al.*, "Construction of leadership competency model for civil aviation flight cadets: An empirical study from China," *Scientific Reports*, vol. 15, no. 1, p. 12739, 2025. https://doi.org/10.1038/s41598-025-93713-y

[4] N. N. Abdelhadi *et al.*, "Pharmacy students' motivations, satisfaction, and future career plans: A cross-sectional study exploring gender differences," *PloS one*, vol. 20, no. 3, p. e0317896, 2025. https://doi.org/10.1371/journal.pone.0317896

[5] T. S. Capper, K. Haynes, and M. Williamson, "How do new midwives' early workforce experiences influence their career plans? An integrative review of the literature," *Nurse Education in Practice*, vol. 70, p. 103689, 2023. https://doi.org/10.1016/j.nepr.2023.103689

[6] N. M. Al Hamad, O. E. Adewusi, C. C. Unachukwu, B. Osawaru, and O. N. Chisom, "The role of counseling in developing future STEM leaders," *World Journal of Advanced Research and Reviews*, vol. 21, no. 1, pp. 1184-1196, 2024. https://doi.org/10.30574/wjarr.2024.21.1.0117

[7] W. Gao, W. Tang, and J. Wang, "Relationship between career adaptability and competitive attitudes among Chinese college students," *Journal of Adolescence*, 2025. https://doi.org/10.1002/jad.12475

[8] J. Henseler, C. M. Ringle, and M. Sarstedt, "A new criterion for assessing discriminant validity in variance-based structural equation modeling," *Journal of The Academy of Marketing Science*, vol. 43, no. 1, pp. 115-135, 2014. https://doi.org/10.1007/s11747-014-0403-8

[9] J. Drobnič, "People with special needs and career development based on strength," *Center for Educational Policy Studies Journal*, vol. 13, no. 3, pp. 213–232-213–232, 2023. https://doi.org/10.26529/cepsj.1381

[10] C. L. de Carvalho, M. d. C. Taveira, and A. D. Silva, "Integrative review on career interventions with unemployed people: Nature, outcomes, and recommendations," *Journal of Employment Counseling*, vol. 61, no. 1, pp. 18-45, 2024. https://doi.org/10.1002/joec.12214

[11] M. Kekki and J. Linde, "Career counsellors' professional agency when working with migrants," *International Journal for Educational and Vocational Guidance*, vol. 24, no. 2, pp. 269-287, 2024. https://doi.org/10.1007/s10775-022-09566-8

[12] N. Wang, J.-H. Ye, W. Gao, Y.-S. Lee, L. Zeng, and L. Wang, "What do they need?—The academic counseling needs of students majoring in art and design in a higher vocational college in China," *Heliyon*, vol. 10, no. 6, 2024. https://doi.org/10.1016/j.heliyon.2024.e27708

[13] J. M. Fitzpatrick, L. A. Bianchi, N. Hayes, T. Da Silva, and R. Harris, "Professional development and career planning for nurses working in care homes for older people: A scoping review," *International journal of older people nursing*, vol. 18, no. 1, p. e12519, 2023.

[14] J. Shi, Y. Feng, X. Cao, R. Gao, and Z. Chen, "Perceptions Toward Artificial Intelligence (AI) Among Animal Science Students in Chinese Agricultural Institutions—From Perspectives of Curriculum Learning, Career Planning, Social Responsibility, and Creativity," *Sustainability*, vol. 17, no. 6, p. 2427, 2025.

[15] W.-Y. Xie *et al.*, "Evaluation of career planning group counseling and its effectiveness for intern male nursing students," *BMC Medical Education*, vol. 23, no. 1, p. 34, 2023. https://doi.org/10.1186/s12909-022-03981-9

[16] A. K. McNichol, R. Lengelle, and R. F. Poell, "Career writing interventions for career learning: An integrative literature review," *British Journal of Guidance & Counselling*, vol. 52, no. 6, pp. 1151-1180, 2024. https://doi.org/10.1080/03069885.2024.2389845

[17] E. Q. Rosenzweig *et al.*, "Beyond STEM attrition: Changing career plans within STEM fields in college is associated with lower motivation, certainty, and satisfaction about one's career," *International Journal of STEM Education*, vol. 11, no. 1, p. 15, 2024. https://doi.org/10.1186/s40594-024-00475-6

[18] G. Ran and R. G. Cinamon, "Career self-efficacy, future perceptions, and life satisfaction: Investigating two adolescent career development models," *Journal of Career Development*, vol. 50, no. 4, pp. 764-784, 2023. https://doi.org/10.1177/08948453221124891

[19] S. S. Pandya and J. Wang, "Artificial intelligence in career development: A scoping review," *Human Resource Development International*, vol. 27, no. 3, pp. 324-344, 2024. https://doi.org/10.1080/13678868.2024.2336881

[20] J. G. Maree, "Exploring innovative career counselling strategies for universal relevance and sustainability in the anthropocene era," *Australian Journal of Career Development*, vol. 33, no. 1, pp. 15-24, 2024. https://doi.org/10.1177/10384162241236418

[21] A. Kaliris, P. Issari, and K. Mylonas, "Narrative potential and career counseling under quantity, quality, and mixed interventions: An emphasis on university students," *Australian Journal of Career Development*, vol. 32, no. 1, pp. 48-59, 2023. https://doi.org/10.1177/10384162231153530

[22] H. Jo, M. Park, and J. H. Song, "Career competencies: An integrated review of the literature," *European Journal of Training and Development*, vol. 48, no. 7/8, pp. 805-832, 2024. https://doi.org/10.1108/EJTD-04-2023-0052

[23] N. A. Fouad, M. B. Kozlowski, S. S. Schams, K. N. Weber, W. D. Tapia, and S. G. Burrows, "Why aren't we there yet? The status of research in women's career development," *The Counseling Psychologist*, vol. 51, no. 6, pp. 786-848, 2023. https://doi.org/10.1177/00110000231178539

[24] J. Zhao and X. Yu, "The Application of Group Counseling in College Students' Career Planning [J]," *Applied & Educational Psychology*, vol. 5, no. 3, 2024.

[25] R. W. Lent, S. D. Brown, and G. Hackett, "Toward a unifying social cognitive theory of career and academic interest, choice, and performance," *Journal of Vocational Behavior*, vol. 45, no. 1, pp. 79-122, 1994. https://doi.org/10.1006/jvbe.1994.1027

[26] G. Lu and S. Wen, "Are students' abilities better developed at double first-class universities? Evidence from Chinese university graduates," *Research in Higher Education*, vol. 65, no. 2, pp. 303-321, 2024. https://doi.org/10.1007/s11162-023-09758-3

[27] J. Zheng, "Employment core competencies of chinese higher vocational students: A systematic review and research agenda," *Online Journal for TVET Practitioners*, vol. 9, no. 1, pp. 62-72, 2024.

[28] N. Zakaria, M. Faisal, H. Malini, S. Sobirin, and M. Marzuki, "guidance and counseling management: A scientific approach to improving students'mental health," *Jurnal Konseling Pendidikan Islam*, vol. 5, no. 1, pp. 84-95, 2024. https://doi.org/10.32806/jkpi.v5i1.130

[29] A. Zammitti, A. Russo, M. C. Ginevra, and P. Magnano, ""Imagine your career after the COVID-19 pandemic": an online group career counseling training for university students," *Behavioral Sciences*, vol. 13, no. 1, p. 48, 2023.

[30] J. Zhou, W. Zhou, X. Liu, L. Pan, X. Li, and N. Shan, "Career planning in medical students rotating through obstetrics and gynecology: The role of self-efficacy, social support, and personal participation," *Advances in Medical Education and Practice*, pp. 297-309, 2025. https://doi.org/10.2147/AMEP.S494749

[31] X. Li, M. S. Rahman, and L. Yu, "Is university support effective? A longitudinal study of cultural adaptation of south asian students in Chinese universities," *Journal of Studies in International Education*, vol. 28, no. 4, pp. 643-662, 2024. https://doi.org/10.1177/10283153231211993

[32] D. Wu, "Exploring digital literacy in the era of digital civilization: A framework for college students in China," *Information Services and Use*, vol. 44, no. 2, pp. 69-91, 2024. https://doi.org/10.3233/ISU-230199

[33] H. Wu, W. Liu, and Y. Zeng, "Validating the AI-assisted second language (L2) learning attitude scale for Chinese college students and its correlation with L2 proficiency," *Acta Psychologica*, vol. 248, p. 104376, 2024. https://doi.org/10.1016/j.actpsy.2024.104376

[34] D. David, A. Szentagotai, K. Eva, and B. Macavei, "A synopsis of rational-emotive behavior therapy (REBT); fundamental and applied research," *Journal of rational-emotive and cognitive-behavior therapy*, vol. 23, pp. 175-221, 2005.

[35] J. Hair and A. Alamer, "Partial least squares structural equation modeling (PLS-SEM) in second language and education research: Guidelines using an applied example," *Research Methods in Applied Linguistics*, vol. 1, no. 3, p. 100027, 2022.

[36] X. Qiu, T. Zhang, and S. Dong, "Self-regulated strategy instruction: Insights from ESP teachers at a Chinese university and vocational college," *System*, vol. 120, p. 103188, 2024. https://doi.org/10.1016/j.system.2023.103188

[37] J. Xu, "Enhancing Student Creativity in Chinese universities: The role of teachers' spiritual Leadership and the Mediating effects of positive psychological capital and sense of self-esteem," *Thinking Skills and Creativity*, vol. 53, p. 101567, 2024. https://doi.org/10.1016/j.tsc.2024.101567

[38] X. Zou, P. Su, L. Li, and P. Fu, "AI-generated content tools and students' critical thinking: Insights from a Chinese university," *IFLA Journal*, vol. 50, no. 2, pp. 228-241, 2024. https://doi.org/10.1177/03400352231214963