

Exploring the impact of career guidance intervention on secondary students under a whole-school benchmark approach in Hong Kong

Yip Yam Wing, Stephen, sywyip@eduhk.hk
Wu Ting, twu@eduhk.hk
Chun Wai Sun, Derek**, dwschun@eduhk.hk

**Correspondence: Chun Wai Sun, Derek, dwschun@eduhk.hk

Research Development Office, The Education University of Hong Kong

Abstract

The enhancement of career guidance in schools has emerged as a pressing global concern in the twenty-first century, especially in the current post-modern era after post-COVID challenges and technological advancements in the workplace; the role of schools in facilitating the transition from school to career has become pivotal. Thus, the Gatsby Benchmarks was established in 2014 by establishing a groundbreaking and world-class standard framework in the field of career guidance, and the Hong Kong Benchmarks (HKBM) was adopted in late 2019 in response to the success of the Gatsby Benchmark. Against this backdrop, this paper aims to explore the preliminary impacts, especially holistic Career and Life Development (CLD) of students after the adoption of HKBM at the secondary school level. The findings suggest HKBM has had a significant impact on students' career readiness and affective and social outcomes.

Keywords: Career guidance, career readiness, Gatsby Benchmarks, whole-school approach, affective and social development, systems theory framework of career development, Hong Kong

1. Introduction

The enhancement of career guidance in schools is a pressing global concern (Holman, 2014, p.3). With the increasingly complex and protracted school-to-work transitions faced by young individuals, influenced by various factors like government policy changes, labor market intricacies at local and global levels, post-COVID challenges, and technological advancements in the workplace (Mann & Huddleston, 2017; Pavlova et al., 2018, pp.1–12), the role of schools in facilitating these transitions has become pivotal. Schools are now expected to actively support young people in acquiring the necessary knowledge, skills, attitudes, and values to navigate, plan, and shape their futures. In this

context, the provision of effective career guidance within the school education system has gained increasing significance. It is recognized as an integral component that yields multiple impacts and substantial cost-benefits (Holman, 2014, pp.6–9), particularly in terms of enhancing youths' career readiness (Gysbers, 2000; Dodd et al., 2022), promoting social mobility (Hanson & Neary, 2020), and fostering socio-affective development (Yip & Fung, 2019). However, research on career guidance in schools has predominantly focused on the effects of activity-based or career-counseling services, with limited exploration of the comprehensive integration of school-based career guidance activities, policies, and interventions as a cohesive whole (Holman, 2014, p. 5). Thus, the Gatsby Benchmarks was established in 2014 revolutionized the field of career guidance by incorporating best-practice elements from six high-performing countries or regions, establishing a groundbreaking and world-class standard framework (Holman, 2014). The Gatsby Benchmarks, encompasses a broad-based definition of career guidance and comprises eight benchmarks that collectively define what exemplary practice entails. Such a perspective is essential for practitioners and policymakers to understand what good looks like when schools are committed to implementing comprehensive career guidance intervention in a whole-school approach. This can provide a comprehensive framework for schools by ensuring high-quality, broadly defined career guidance (or career and life development, CLD) and enabling young individuals to make informed decisions about their future pathways.

In response to the success of the Gatsby benchmarks in the United Kingdom and the local need for comprehensive career guidance in Hong Kong (Tam, 2015; Lee, 2017; Ho, 2008), the CLAP@JC¹ project Phase I (2015–2020) was initiated, and six schools were invited to participate in a pilot study before the adoption of the Hong Kong Benchmarks² (HKBM) in late 2019. The HKBM, consisting of ten benchmarks, aligns with government policies and aims to address local challenges while promoting world-class standards in career and life planning education (CLPE) (Holman & Yip, 2020, pp. 8–12), under the tacit knowledge generated from CLAP@JC (Phase I) which is primarily based on the Youth Development and Intervention Framework (YDIF) (CLAP@JC, n.d.). The ten benchmarks are as follows:

¹ CLAP@JC is a ten-year trust-initiated project and Hong Kong's cross-sectoral support platform on career and life development (CLD), aiming to foster a sustainable ecosystem by bringing together the education, business, and community sectors to smoothen the transition from school to work for all youth.

² The design of the ten-benchmark framework makes contextualized reference to (i) influence from the Confucian Heritage Culture (CHC) especially among parents and students (Yip, Holman & Lam, 2024); (ii) the existing policy-practice landscape of New Senior Secondary (NSS) and Multiple Pathway systems with the advocacy of Vocational and Professional Education and Training (VPET) (Hong Kong Education Bureau, 2019); (iii) emphasis on STEM education (including the recent development of the Greater Bay Area) (Hong Kong Education Bureau, 2016) and (iv) Quality Assurance/Self-evaluation mechanism for schools (Hong Kong Education Bureau, 2022).

- 1) A Stable and Visible Career and Life Development Policy (BM1)
- 2) Professional Competencies and Leadership (BM2)
- 3) Learning from Multiple Pathways Information (BM3)
- 4) Address the Needs of Each Student (BM4)
- 5) Student Engagement and Co-creation (BM5)
- 6) Personal Guidance for Developing Career Roadmaps (BM6)
- 7) Linking Curriculum Learning to Career and Life Development (BM7)
- 8) Meaningful Encounters with the Workplace (BM8)
- 9) Meaningful Encounters with Further and Higher Education (BM9)
- 10) Parent Engagement and Support (BM10)

Given that schools play a central role in the lives of young individuals and deliver key career guidance intervention, there is a need to examine how HKBM has been applied in whole-school contexts. Hence, this study aims to explore the preliminary impacts of Whole-School Benchmark Approach (WSBA), especially towards holistic CLD of students' after HKBM adoption at the school level.

2. Literature Review

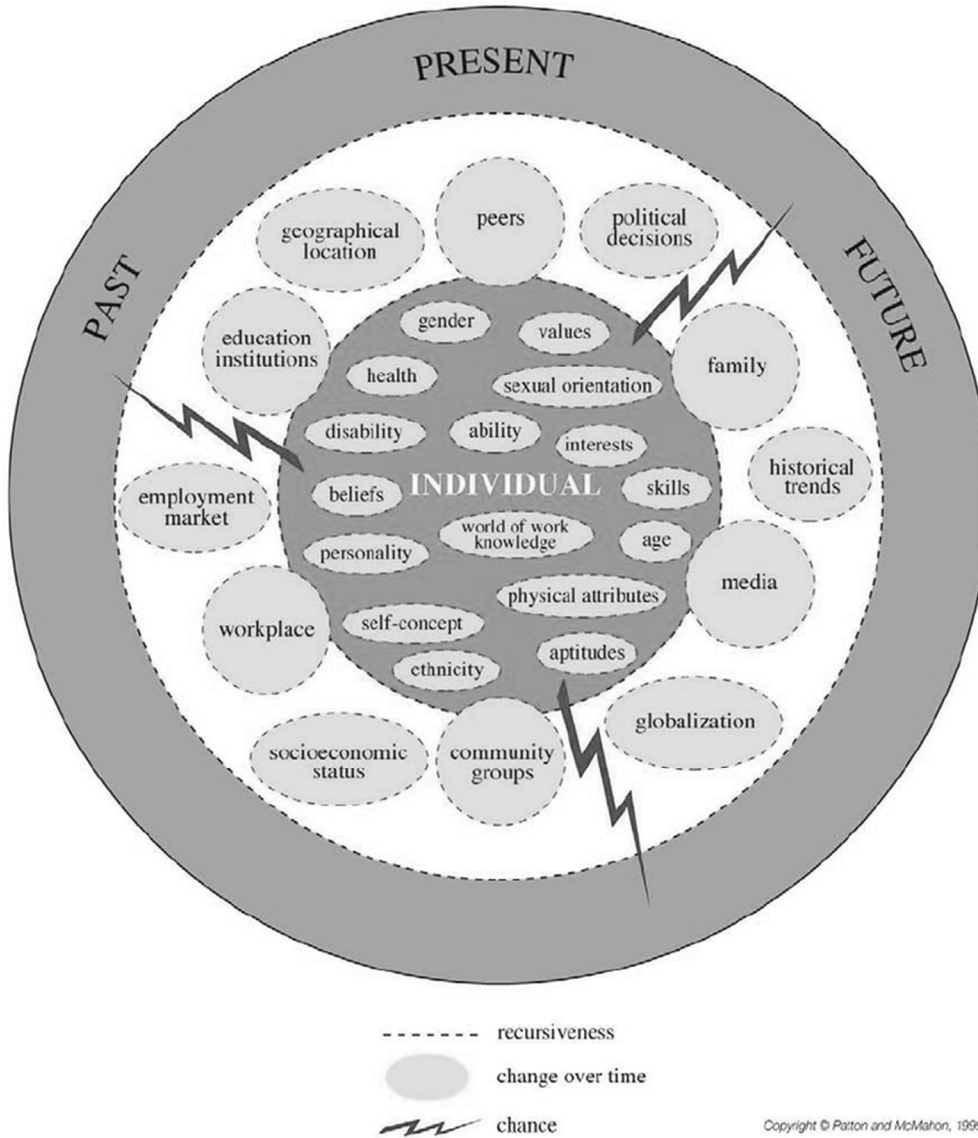
To better understand the theoretical basis of a broad-based career guidance operates in whole-school contexts under HKBM adoption, the following will elaborate on a system theory framework suggested by Australian scholars (e.g., McMahon & Patton (2015), etc.). In addition, we will make a brief account on the theoretical synthesis of YDIF as part of the precursor of HKBM content design.

2.1 Systems Theory Framework of Career Development (STF)

STF promotes a *meta-theory framework* that promotes systems thinking in understanding individuals' career behaviors. Through STF's articulated constructs and the clarity of its diagrammatic representation (See Figure 1), we can see that there are many factors clustered in different systems affecting an individual's career development. Over the years, the STF has evolved and been refined, becoming the first comprehensive meta-theoretical framework of career development based on systems theory. It integrates concepts from existing career development theories, emphasizing the individual's construction of career meaning within their particular context. The STF encompasses both the content and dynamic process of career development, considering influences from various levels, such as individual therapeutic system, social/ organisation systems, environmental-societal systems, and time (McMahon, Watson, & Patton, 2015). It provides a framework for career counselors/educators to assess the relevance of theoretical constructs and

emphasizes the importance of individuals constructing their STFs through storytelling. The STF operates at both the *macro* and *micro* levels of analysis, aligning with the shift towards constructivist approaches in career development (Tsui et al., 2019).

Figure 1: Systems Theory Framework of Career Development (McMahon et al., 2015)



According to Hong Kong researchers, the STF views career development as a dynamic process influenced by various interconnected systems, including individual, social, and environmental factors (Tsui et al., 2019). It emphasizes the reciprocal interactions between individuals and their environments, recognizing that career choices and outcomes are influenced by both internal characteristics and external influences. The framework highlights the importance of considering multiple levels of analysis, such as microsystems (e.g., family and peers), mesosystems (e.g.,

education and work settings), and macrosystems (e.g., cultural, and societal values), in understanding career development. This meta-theoretical framework contributes to career development theories by providing a holistic perspective that acknowledges the multifaceted nature of individuals' career journeys. It recognizes that career decisions are influenced by a range of interconnected factors, and interventions should address both individual-level factors (e.g., skills, and interests) and contextual factors (e.g., social support, and economic conditions). It further helps career practitioners and researchers understand the complex interplay between individuals and their environments, enabling them to design more effective career interventions and support systems (Lent, 2005). The importance of STF is to provide another perspective for researchers to investigate other contextual and environmental factors that impact on individuals' career decision-making. School, in its broad definition, is a typical environment that requires educators' special attention in facilitating young people in transitioning to work via career guidance. Other than individual-level factors, other important systems influence individuals' CLD, such as the social-family system, social-peers system, school process system, and environment-societal system as mentioned above.

The approach promoted by the Gatsby Benchmarks and HKBM aligns with the *core spirit* of STF and strongly emphasizes on what schools (school leaders, teachers, and other stakeholders) can offer the best to their students to facilitate them to become 'career ready' in their school-to-work journeys. Under the lens of STF, HKBM can be categorized into three major components that practically define certain school aspects in CLD, namely:

- *Core component* (BM1 and 2, see pp. 2–3): Under the *school process* systems, this describes how a school makes good leadership/management decisions in CLD and how it builds its personnel capacities effectively in achieving CLD goals.
- *Student-focused component* (BM3-6, see pp. 2–3): Under the individual-level system and social-peers system, this describes how a school effectively helps individuals (both personally and collectively) in self-understanding, learning from career-related information, career road mapping typically under the concepts from YDIF.
- *Enabling Environment component* (BM7-10, see pp. 2–3): Under the environment-societal system, school process system, and social-family system, this describes how outside factors (e.g., study life, the world of work/ future employers, tertiary institutions, and parents), positively influence career and study decision-making.

As pointed out by Holman (2014) after empirically analyzing six countries/ regions' school practices, his conclusive remark is as follows to celebrate the power of *systems thinking* in career guidance that is as important as implementing individual-based counseling-laden intervention based on any contemporary career theories:

As we discovered, good career guidance means linking different activities together to form a coherent whole. ...there is no single 'magic bullet' for good career guidance: it is about doing a number of things, identified in our benchmarks, doing them consistently, doing them well, and doing them for each and every student. (Holman, 2014, p. 5 and p. 55)

2.2 Indigenization of Career Theories in Hong Kong Context

The global development of career guidance necessitates a combination of universally applicable theoretical frameworks and culturally specific models to address local career development issues. Hence, Enriquez's concept (1993) of indigenization can serve as a guide for adapting career development theories. Indigenization can occur both from within a culture, drawing on indigenous sources of knowledge, and from outside by incorporating external perspectives. This process would result in the formulation of career development concepts that hold specific cultural meanings and the implementation of career guidance methods that align with specific cultural features, practices, and beliefs. For example, considering the effects of filial piety on career choice in Asian cultures would be an essential aspect of indigenization, the HKBM design includes a specific benchmark on parental engagement (BM10) to address the cultural issue (Yip, Holman & Lam, 2024).

Besides, YDIF can be regarded as an indigenized framework to guide career and life planning interventions in schools and communities and to set focus and content for the training of career and life planning professionals in Hong Kong (CLAP@JC, n.d.). It represents a comprehensive and proactive individual-based approach to supporting the growth and well-being of young individuals in any institutional setting and serves as a guiding tool for professionals (both teachers and youth workers) and other stakeholders working with young individuals. By recognizing the multidimensional nature of youth development, promoting positive relationships and environments, as well as providing targeted interventions, this framework aims to empower young people to become resilient, capable, and engaged members of society (CLAP@JC, n.d.). Even though these intervention strategies are derived from a pragmatic synthesis of career intervention theories worldwide and Leung's (2008) Big Five Theories, YDIF is designed to ensure that the content and delivery are 'tailored' for young people in the social, educational, and occupational context of Hong Kong (See Note for YDIF details). According to Leung, the 'Big Five' theories of career development are: a) The Theory of Work Adjustment (TWA) (Dawis, 2002, 2005; Dawis & Lofquist, 1984); b) Holland's Theory of Vocational Personalities in Work Environment (Holland, 1985); c) the Self-concept Theory of Career Development (Super, 1990); d) Gottfredson's Theory of Circumscription and Compromise (1981, 1996, 2002, 2005); and e) Social Cognitive Career Theory (Bandura, 1997).

2.3 HKBM Brings Individual-level YDIF and School-level intervention Together

Building on the foundation of the Gatsby Benchmarks (Holman, 2014; Holman & Yip, 2020), the ten benchmarks of HKBM cohere with the basic constructs in the STF (McMahon et al., 2015; Tsui et al., 2019) and the key concepts of YDIF (Leung, 2017). They provide a comprehensive two-level approach to the betterment of school career programs and as a meta-theoretical (umbrella) frame, the ten interlocking benchmarks inform their items to describe what matters in terms of effectiveness of school CLD programs.

In schools, the organizational system matters. Although the YDIF serves as a foundation for understanding and supporting youth development, HKBM plays a pivotal role in addressing the specific challenges and opportunities faced by Hong Kong school-age young people. The simple fact is that they are ‘boxed’ in the school systems as explained by STF. In CLD, the school itself is an ecosystem that youths in school (students) may face under STF as well as the ‘Past-Present-Future’ influencing factors (Tsui et al., 2019). HKBM enables a necessary enrichment to the YDIF, in which an individual’s CLD is deeply affected by his or her school’s culture, policies, and practices in all education aspects. This includes societal-environmental influences, such as the academic system and post-secondary admission policies, as well as social systems among peers and family members. Factors in the individual system, whereas YDIF and Leung’s Big Five theories, insufficiently explain or help individuals navigate paths from school to work such as making JUPAS³ choices that do not match with their personal interests. Another example is that some higher school banding⁴ teachers do not support students to choose non-university paths. Hence, HKBM embedded with YDIF concepts, can bridge the gap to create a new whole-school positioning on CLD and catalyzes necessary organizational changes.

Apart from organizational changes, HKBM enhances the cultural relevance of the YDIF by incorporating localized values, beliefs, and practices, dominantly identified as the Confucian Heritage Culture (CHC). According to Yip, Holman, and Lam (2024), three main socio-cultural differences are identified among CHC students and schools in CLD, namely: (1) strong parental influences in personal CLD explained by filial piety; (2) lacking a sense of agency or motivation in CLD among students; and (3) strong collectivism and relatively less in individualism at all stakeholder levels in a school organization. In addition, HKBM also ensures that CLD interventions are respectful of the cultural context and resonate with the experiences and aspirations of young people in Hong Kong. By recognizing and valuing cultural diversity and tackling career stereotyping, HKBM promotes inclusivity and addresses the unique and timely challenges faced by

³ JUPAS – Joint Universities Programmes Admissions System in Hong Kong

⁴ School banding refers to classifying primary school graduates into three bands according to their performance in the school internal examinations with moderation by Pre-Secondary One Hong Kong Attainment Test. Students with top results will be grouped into Band One, the weakest group of students belongs to Band Three, while those in between will be classified into Band Two.

different socio-cultural groups within the Hong Kong youth population, such as including ‘slashers’ and some newly emerging job types as examples. To conclude, HKBM helps practitioners and policymakers identify specific areas of focus and develop targeted interventions that address the pressing needs of Hong Kong youth to make sure that resources and efforts are directed towards the most relevant and impactful strategies, tailored to the unique social, economic, and educational landscape of Hong Kong.

HKBM serves as an umbrella multi-dimensional framework to enrich the ‘youth-oriented’ YDIF, addressing the specific needs and context of schooled youth development in Hong Kong. By incorporating localized systems, values, cultural relevance, and outcome measurement, the benchmarks enhance the effectiveness of the YDIF and ensure that interventions are aligned with the international standards depicted by the Gatsby Benchmarks and other global agencies (e.g., OECD). The adoption of these benchmarks in schools promotes networking and collaboration, empowers stakeholders, and supports the holistic development of young people in Hong Kong. More importantly, it aims to enhance organizational capacities and cross-team effectiveness by gaining the backing of senior management and teachers (both career and non-career team teachers).

2.4 Whole school benchmark approach (WSBA) career guidance intervention: HKBM as a tool and as a process

After the pilot study with six schools, CLAP@JC entered phase II (2021-2025) by inviting 50 schools, as the first cohort, to make school-based improvements to their CLPE programs under the WSBA career guidance intervention described by the HKBM. Schools were supported by critical friends⁵, teacher training, and networks as integral components of the initial two-year adoption process. School adoption of the WSBA together with the provided support is defined as the ‘treatment’ of this research. In sum, the WSBA career guidance intervention is unpacked as follows (Yip, 2020; CLAP@JC, 2021):

- Using WSBA as a *tool in self-evaluation & school improvement*: individual schools as ‘a coherent whole’ are asked to regularly self-evaluate their own CLD provisions against the items of each benchmark. Action plans are to be drawn up to address school-based issues, challenges, and weaknesses.
- Using WSBA as a *process to enhance school capacities*: Infusing HKBM-based support provided by CLAP@JC (e.g., critical friends, resources, and events) at both school and hub/network levels, to maximize school-based CLD improvement.

CLAP@JC has emerged as a significant influencer in the field of life-planning education,

⁵ The Critical Friends process focuses on developing collegial relationships, encouraging reflective practice, and rethinking leadership.

shaping its interpretation and implementation in schools over the past five years (Holman & Yip, 2020). With the introduction of the YDIF framework and the HKBM, CLAP@JC has increased its impact levels, aligning with world-class standards in career guidance and facilitating the connection between best practices in career and life development within schools and broader career guidance standards.

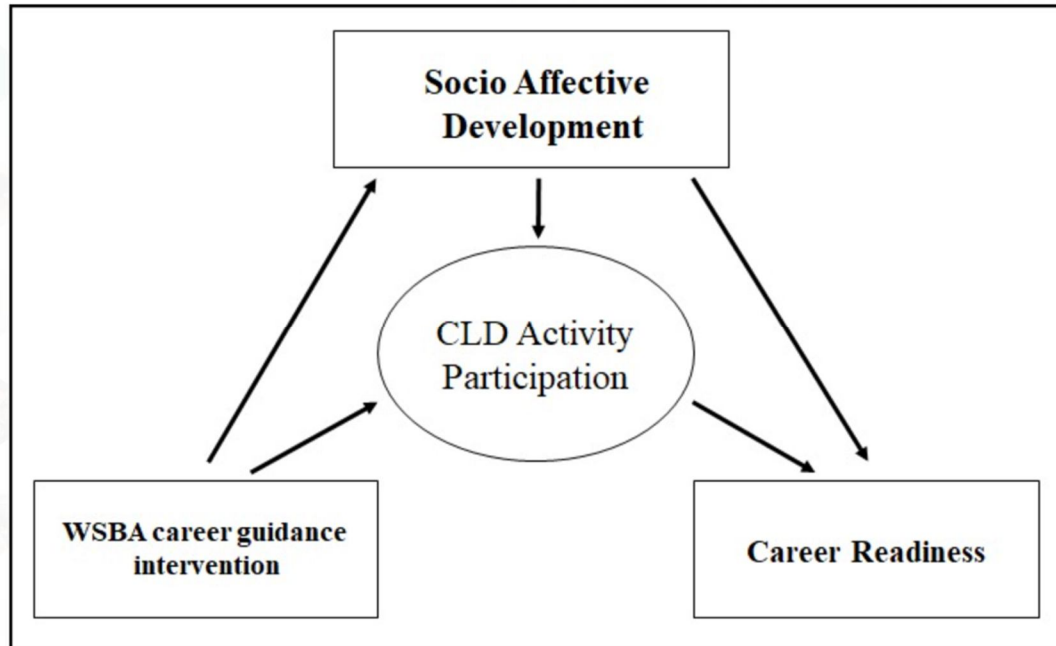
In summary, the anticipated impact of the WSBA intervention in this study can be attributed to the cumulative contributions of CLAP@JC over the years. The HKBM has generated and accumulated valuable knowledge, tools, approaches, and models that have greatly influenced the sector. It has provided a foundation for the effective implementation of comprehensive career guidance practices, making a significant and lasting impact on the field of CLPE. In sum, the WSBA can be defined as an instrument-based school improvement process that embraces a youth development invention model to help smooth young people's school-to-work transitions. As a pioneering effort, this study aims to explore its impact on students' career readiness and socio-affective domains using an existing project database.

3 Methodology

3.1 Proposed Model and Hypotheses

Based on the above discussion of YDIF and HKBM adaptation in the Hong Kong context, the proposed model of this study is formulated to explore the impact of WSBA career guidance intervention using career readiness as the main outcome. It includes Socio-Affective Domains, School-Based LPE Programs, CLD Activities, and Career Readiness. The socio-affective domains influenced by the LPE program contribute to CLD activities. Participating career provisions leading to higher CLD (or CR) is strongly evident in the literature (Department for Education, 2017; Hanson & Neary, 2020; Yip 2020). CLD activities include career exploration, job shadowing, internships, mentorship programs, and workshops designed to expose students to different careers, industries, and work environments. The enhanced socio-affective skills gained through the LPE program enables students to actively engage in CLD activities, make informed career decisions, and explore various career pathways (Holman, 2014). The culmination of the model lies in career readiness and driving the socio-affective domains influenced by the LPE program and the participation in CLD activities that collectively contribute to students' overall career readiness, which encompasses a range of competencies (Hanson et al, 2021). The proposed model is shown Figure 2 below.

Figure 2: The Proposed Model of the exploratory study



The proposed model illustrates the interconnectedness between a WSBA career guidance intervention, socio-affective domains, participations in CLD activities, and students' career readiness. In this model, the WSBA career guidance intervention or provisions would affect CLD activity participation and socio-affective development. The development of socio-affective domains towards students would have a relative impact on CLD activity participation. Both CLD activity participation and psychological development would affect the results of the career readiness of youth. By focusing on the socio-affective development of students, the LPE program enhances their ability to engage in CLD activities, explore career options, and develop the necessary skills for successful career paths. Ultimately, this model aims to prepare students for a fulfilling and successful transition into the world of work in the context of Hong Kong, China. In this light, the overall goal of this research is to investigate if the WSBA CLPE intervention will also yield positive and significant impacts on students' career readiness, and social affective outcomes (e.g., self-concepts, attitude towards school, motivation, and goals of life) as well as the participation of CLPE activities within the measured period. While this paper attempts to hypothesize treatment (adopting HKBM as an intervention) of the schools can enhance their students' career readiness and other related psychological/affective-social variables as well, two research questions will be examined:

- To what extent did the schools' HKBM adoption or the WSBA career guidance intervention improve their students' career readiness and other related psychological/affective-social learnings?

- What are the inter-relationships among the WSBA, student CLD participation, Affective-social learning, and Career Readiness in the sample of school students?

3.2 Sample

The CLAP@JC project regularly collects school and student data from several treatment schools and non-treatment schools for basic evaluation and monitoring. In this study, we randomly selected a total of 515 cases from 15 treatment schools (n=469) and 2 control schools⁶ (n=46), based on the available longitudinal data pool of these schools. To achieve this, we randomly chose at least 5 males and 5 females from each grade level (grade 10 to grade 12) in each treatment school, and at least 3 males and 3 females in control schools from each grade level. As a result, there are 255 males, and 260 females to ensure that there is no gender representation bias.

3.3 Procedures

The student career-and-life-development questionnaire (Hanson, 2020; Dodd et al., 2022) was administered to conveniently sampled students from grade 9 (form 3) to grade 11 (form 5) in secondary schools that were part of the 50 participating schools in Cohort 1 of the CLAP@JC intervention project. The questionnaire was administered once at the end of the academic year 2020/21 in 2021 and again at the end of 2021/22 when the students were in grade 10 to grade 12. The career head teacher at each school served as the gatekeeper and invited students to participate in the survey study. The career head teacher had the option to choose between the paper and online versions of the questionnaires. In total, a certain number of respondents used the paper version of the questionnaire, while another number of respondents used the online version. Some respondents' data had to be deleted due to missing data. Table 1 below shows the demographics in the random sampling procedure.

⁶ Control schools followed Education Bureau policy and guidelines which advocated a broad non-systematic YDIF approach without benchmark adoption.

Table 1: Path Analysis Results: Direct Effects, Indirect Effects, and Total Effects of Antecedent Variables on Endogenous Variables

Antecedent variables	Motivation T2			Participation in CLD education activities T2			Attitude toward school T2			Life goal setting T2			CDMSCPT2		
	Dir.	Ind.	Tot.	Dir.	Ind.	Tot.	Dir.	Ind.	Tot.	Dir.	Ind.	Tot.	Dir.	Ind.	Tot.
Gender															
Form (Grade level)															
Treatment															
CDMSKP T1															
Self-concept															
Motivation															
Part. in CLD ed. act.															
Attitude tow. sch.															
Life goal set.															

Note: “Part. in CLD Ed. Act.” represents Participation in career-and-life-development education activities. “Attitude tow. Sch.” refers to the Attitude toward school. “Life goal set.” represents Life goal setting. “CDMSCP” stands for Career decision-making-skills confidence & progress. “Dir.” represents Direct effect. “Ind.” means the Indirect effect. “Tot.” represents the Total effect.

3.4 Instruments

The student questionnaire encompassed several components, including participation in CLD-related activities (Mann, 2018), Student Career Readiness Index (Hanson et al., 2021; Dodd et al., 2022) and Assessment Program for Affective Social Outcomes II (APASO-II). APASO-II is a tool adopted by the Hong Kong Education Bureau to examine affective and social outcomes of students. The notion of career readiness was adapted from the Student Career Readiness Index (SCRI) (Dodd et al., 2022) to suit the context of Hong Kong.

Originally SCRI contained 21 items with four composite measures, namely Career Planning, Management Skills, Transition Skills Information and Help-seeking Skills, and Work Readiness. However, after conducting parallel analysis, commonalities under .30 items have been removed in a final one-factor loading solution with ten items, indicated SCRI (Hong Kong version). To appropriately examine the related affective and social outcomes aligning with career and life development outcomes, the constructs of self-concept, motivation, attitude towards school, and life

goal setting from APASO-II were selected with all items used because those constructs can fully reflect how individuals are affected from self-understanding and school climate and gain their life aspiration. (Moore, et al., 2006; Wu & Mok, 2017).

4 Results

Data were first analyzed using pre- and post-tests between the treatment samples and the control samples. The results show that there is a significant difference in career readiness between students from BM-adopted schools and non-BM-adopted schools. Table 2 displays the outcomes of a two-way analysis of variance (ANOVA) conducted on each grade level using random sampling. The purpose was to investigate the means and standard deviations of Career Readiness in T1 and T2 for three longitudinal student samples (T1S3/T2S4, T1S4/T2S5, and T1S5/T2S6), comprising a total of 515 students (random sampling) from both BM Schools and Non-BM Schools.

Table 2: ANOVA Results of BM Schools and Non-BM Schools

		BM Schools		Non-BM Schools	
		T1	T2	T1	T2
T1S3/T2S4	<i>Mean</i>	2.96	3.09***	2.97	2.92
	<i>(SD)</i>	(.88)	(.76)	(.79)	(.63)
		<i>N</i> = 210		<i>N</i> = 21	
T1S4/T2S5	<i>Mean</i>	2.95	3.06**	2.96	2.90
	<i>(SD)</i>	(.79)	(.78)	(.62)	(.80)
		<i>N</i> = 156		<i>N</i> = 22	
T1S5/T2S6	<i>Mean</i>	2.89	3.05*	2.89	2.82
	<i>(SD)</i>	(.86)	(.80)	(.91)	(.53)
		<i>N</i> = 103		<i>N</i> = 4	
<i>Overall</i>	<i>Mean</i>	2.93	3.07**	2.94	2.88
<i>Longitudinal</i>	<i>(SD)</i>	(.84)	(.89)	(.77)	(.65)
<i>Samples</i>		<i>N</i> = 469		<i>N</i> = 46	

Note: In the context of this study, T1 refers to Time 1 (2021) and T2 refers to Time 2 (2022). The “S” denotes Secondary. The following sample descriptions provide information about the students surveyed: T1S3/T2S4: This sample consists of the same students who were in Secondary 3 when they completed the SCS-I survey in 2021. They were then promoted to Secondary 4 and completed the SCS-II survey in 2022.

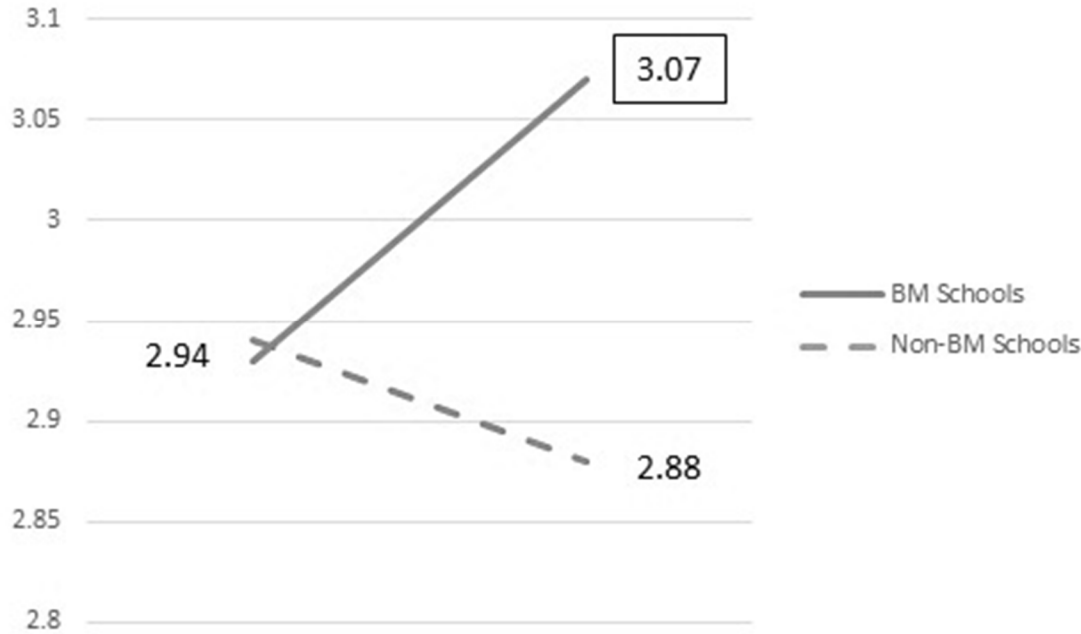
- T1S4/T2S5: This random sample comprises the same students who were in Secondary 4 when they filled out the SCS-I survey in 2021. They were subsequently promoted to Secondary 5 and completed the SCS-II survey in 2022.
- T1S5/T2S6: This random sample includes the same students who were in Secondary 5 when they completed the SCS-I survey in 2021. They were subsequently promoted to Secondary 6 and completed the SCS-II survey

in 2022.

In the paired-sample t-tests conducted, significance levels are denoted as follows:

- ** $p < .01$
- *** $p < .001$

Figure 3: Illustrates the Means of T1 and T2 Career Readiness for both BM School Students and Non-BM Schools' Students with an Overall Longitudinal Sample

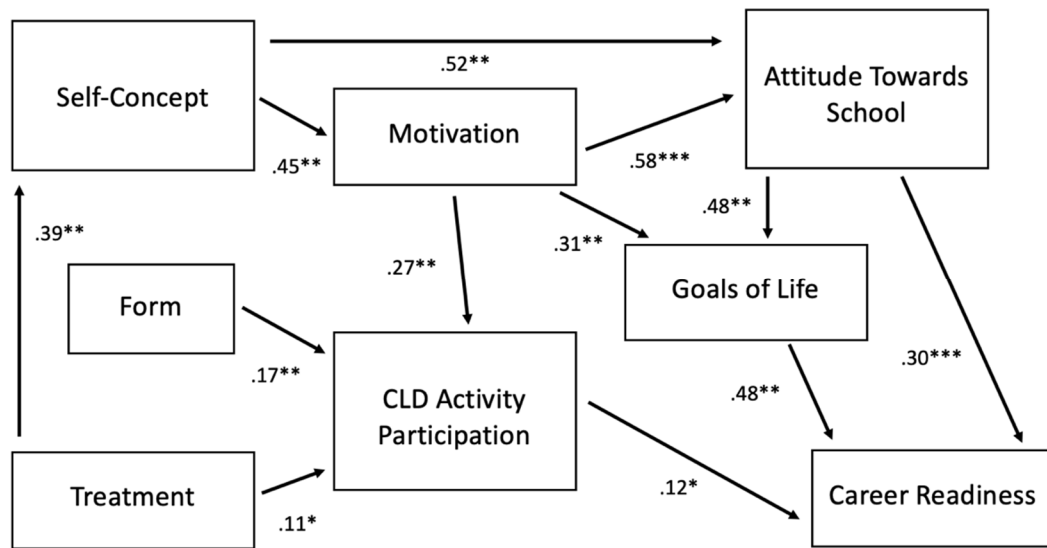


The longitudinal increase in Career Readiness from T1 to T2 among the same students displayed a similar pattern of results as the cross-sectional increase observed between the 2021 and 2022 cohorts. A paired-sample t-test revealed that in the T1S3/T2S4 sample, the T2 Career Readiness (Mean = 3.09, SD = .76) was significantly higher than the T1 Career Readiness (Mean = 2.96, SD = .88) with high statistical significance ($p < .001$). As shown in Figure 3, in the overall longitudinal sample, which included the three cohorts, the T2 Career Readiness (Mean = 3.07, SD = .89) was significantly larger than the T1 Career Readiness (Mean = 2.93, SD = .84) with statistical significance ($p < .01$). Additionally, the non-BM group exhibited an overall T2 Career Readiness (Mean = 2.88, SD = .65) that was smaller than their T1 Career Readiness (Mean = 2.94, SD = .77). Figure 4 illustrates the means of T1 and T2 Career Readiness for both BM Schools' and non-BM Schools' students within the overall longitudinal sample.

Data were then analyzed using path analysis with manifest variables. The maximum likelihood method was used to estimate parameters. All analyses were performed on the variance-covariance matrix. It has been recommended that a model be viewed as displaying an acceptable fit if the RMSEA is $\leq .06$, the NFI is $\geq .90$, and the CFI and TLI are $\geq .95$ (e.g., Hu &

Bentler, 1999; Mueller & Hancock, 2008). Of the proposed model being compared, with the non-significant exogenous variables and non-significant paths removed, the model displayed a significant model chi-square statistic, $\chi^2 (28, N = 515) = 48.26, p < .018$. Addition of the treatment variable with a direct path to posttest participation in CLD education activities caused a significant reduction in the model chi-square statistic, $\Delta\chi^2 = 13.454, p < .05$. The path analysis results are shown in below figure 4.

Figure 4: Path Analysis Results for the Proposed Model



In detail, Means, Standard Deviations, Observed Correlations (Below the Diagonal), and Residuals from the Two Residual Matrix (Above the Diagonal) for the proposed model are shown in Figure 5 below:

Figure 5: Two Residual Matrix

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Career dec. mak. T2	3.85	.48	--										
2. Attitude tow. sch. T2	2.83	.43	.30*	--									
3. Life goal set. T2	2.85	.46	.31*	.48*	--								
4. Part. in CLD T2	.56	.35	.11*	.17*	.27*	--							
5. Motivation T2	2.62	.44	.45*	.27*	.31*	.58*	--						

			*	*	*	**							
6. Self-concept T2	2.52	.47	.39*	.45*	.52	--							
			*	*	**								
7. Treatment	.90	.30	-.07	.04	-.03	.08	-.02	.11*	--				
8. Career dec. mak.	2.85	.82	.26*	.28*	.24*	.12*	.48*	.30*	-.05	--			
T1			**	**	**	*	*	**					
9. Form (Grade level) T2	4.71	.71	.00	.03	.02	.17*	.07	.15*	.06	--			
						**							
10. Gender	.70	.70	-.02	-.01	.01	.08	-.01	.16*	.06	-.12*	-.02	--	
								*		*			
11. School banding	2.42	.72	.12*	-.01	.01	-.06	-.07	-.01	.29*	-.04	-.02	.00	--
			*						**				

Note: The sample size for the analysis was N = 515. “Career dec. mak.” refers to Career decision-making-skills confidence & progress. “Attitude tow. sch.” represents Attitude toward school. “Life goal set.” pertains to Life goal setting (goals of life). “Part. in CLD” denotes Participation in career-and-life-development education activities. T1 represents Time 1 (pretest), and T2 represents Time 2 (posttest). The significance levels are indicated as * $p < .05$, ** $p < .01$, and *** $p < .001$.

The results of the path analysis demonstrated that the proposed model, which included standardized path coefficients for causal paths, revealed significant positive correlations between career readiness, self-concept, and treatment and self-concept. Additionally, there were substantial positive paths from career readiness to motivation and life goal setting. Coefficients marked with asterisks indicate statistical significance, with * $p < .05$, ** $p < .01$, and *** $p < .001$.

5 Discussion

Based on the study conducted on a random longitudinal sample, the findings suggest that the Whole School Benchmark Approach (WSBA) has a significant impact on students’ career readiness (CR) and affective and social outcomes (APASO). These APASO outcomes primarily encompass Goals of Life, Motivation, Attitude Toward School, and Self-Concept within the APASO domain. The observed significant outcomes align well with the intervention concepts of HKBM which have theoretical underpinnings of the systems theory framework (STF) and the framework of youth development and intervention (YDIF), particularly within the unique Chinese cultural context (Yip, Holman & Lam, 2024). The APASO scales employed in the study effectively capture the contributions of these frameworks to the obtained data. Furthermore, APASO serves both as an unconventional measurement tool for career guidance (CG) effectiveness and as a means for schools to evaluate their social-emotional learning (SEL) initiatives, shedding light on how career

guidance, within the WSBA framework, can positively impact the social and affective aspects of students' lives within the school environment and educational agenda. It is important to acknowledge that the study's limitation lies in the lack of rigor or careful moderation, which will be addressed in future longitudinal investigations with more advanced sampling methods. As an exploration exercise, the study findings also reveal the following reflective themes:

5.1 The Importance of Systems Theory Framework (STF) in School-based Career Guidance Provisions

Few large-scale studies or initiatives on CG adopting STF are performed in school contexts. Students are likely being 'boxed' in schools with *unique school-based contexts* that could provide a wide range of either *conducive* or *obstructive* 'forces' to an individual's development (Tsui et al., 2019), typically reflected in CR and APASO. Further in-depth study with mixed methods is required to explore how each system factors (e.g., core, student-focused, and enabling environment) influence students' CLD. These effects are well-embedded in the school ecosystem when young people attempt to make decisions for their own future. According to STF, these contexts can be broadly categorized into five systems, namely personal, social (peers), social (family), school process, and societal environment, which are partially or fully addressed by the ten items in the HKBM.

After all, classical systems thinking in organizations (Forrester, 1961; Senge, 2006), rooted in the "individual in context" perspective, is the most fundamental aspect of all career development theories. To some extent, no career theories could bypass the comprehensive lens of STF. Such a systems approach allows for the integration of valuable concepts from various theories into the understanding of career behaviours. The Systems Theory Framework (STF), developed by McMahon et al. (2015), exemplifies this approach by providing a comprehensive metatheoretical framework for career development based on systems theory. The STF has facilitated the development of both qualitative and quantitative career assessment instruments. Its articulated constructs and diagrammatic representation offer clarity and structure, enabling career counselors (or educators) to better understand and evaluate the complexities of individuals' career development processes. By considering influences from multiple levels, including individuals, social (organization) systems, environmental-societal systems, and time dimension, the STF captures the dynamic and multifaceted nature of career development.

Originally designed as a model for more senior adolescent career decision-making, subsequent studies have confirmed the applicability of the STF to children and adolescents. As the framework evolved and refined, it became the first comprehensive metatheoretical framework of career development based on systems theory. The STF integrates concepts from existing career development theories, emphasizing the individual's construction of career meaning within their

unique context. One of the notable features of the STF is its emphasis on individuals constructing their career narratives through storytelling. This approach recognizes the importance of personal agency and *meaning making* in career development. It encourages career counselors to facilitate the exploration and articulation of individuals' career stories, helping them make sense of their experiences, aspirations, and values.

The STF operates at both *macro* and *micro* levels of analysis, aligning with the broader shift towards constructivist approaches in career development. This shift emphasizes the active role of individuals in constructing their careers and acknowledges the influence of contextual factors on their choices and development. By adopting a constructivist perspective, the STF enables career counselors to engage in collaborative and youth-centered practices that promote self-awareness, exploration, and decision-making. Leung's (2008) "Big Five" career theories have provided career guidance professionals worldwide with a valuable set of principles and concepts that can be used to inform practice and research. These theories offer a common language and framework for communication within the career guidance field. However, it is important for practitioners and researchers to critically evaluate the cross-cultural limitations of these theories. While the big five career theories have universal elements, it is crucial to recognize that cultural context plays a significant role in shaping individuals' career development.

Practitioners and researchers should be aware of points of divergence, such as the cultural relevance of theoretical constructs, assessment methods, and the content and design of career interventions based on these theories. It is essential to consider these theories' cultural appropriateness and validity when applying them in diverse cultural contexts. HKBM's adoption from the UK to Hong Kong proves these collaborative efforts can be successful. By embracing international collaborations, career guidance professionals can enhance the applicability and effectiveness of the big five career theories locally and globally. These collaborations allow for the exchange of knowledge, experiences, and perspectives from different cultural backgrounds, enriching the field of career guidance and promoting a more inclusive and culturally sensitive approach to career development.

5.2 Benefits of Benchmarking in school CLD provisions: Inside the Black Box

Whether HKBM is a *tool* or a *process* for schools' improvement, the findings suggest that WSBA positively affects students' outcomes. Kelly (2001) points out that benchmarking is a process that compares what is done internally, it is crucial for schools because they need to sensitively respond to the societal expectations quickly to survive and thrive. Further in-depth study is thus required to research the dynamics of school improvement (Yip, 2022). Anecdotal evidence from case studies (CLAP@JC, 2023, pp. 42-43) shows that HKBM is a comprehensive manual benefits school leadership team:

- through motivating school personnel for self-reflection.
- through nurturing self-improvement and self-initiating mindsets among staff.
- through encouraging ‘trial and error’ innovation and hence, energizing the participating school teams.

As schools are often filled with local priorities (e.g., national security education) and global broad-based curriculum change (e.g., STEM education and values education), the design of HKBM also serves as an effective frame for school self-evaluation with reference to the local government’s Quality Assurance requirements (CLAP@JC, 2023; pp. 4–5). From this, school leaders, together with relevant middle managers in career provision, would have better ‘ecological intelligence’ in planning for gradual improvement through resource deployment, cross-unit collaboration, policy adjustment, subject curriculum renewal and stakeholder engagement etc. Without HKBM, career leaders often work in silos with little resources and space to innovate or implement improvement plans. Apart from the conclusion suggesting WSBA increased student participation in CLD activities, there is an interesting observation revealed by path analysis (See Figure 4) that the HKBM intervention (WSBA) also directly impacted students’ self-concepts and then other outcomes without going through CLD activity participation. Non-activity-focused measures, such as school policies and atmosphere nurturing may also play a conducive role in raising students’ career readiness. Further study will be conducted to investigate the full-scale effects of HKBM.

5.3 The Importance of Implanting Youth Development Strategies into Ecologically Friendly Benchmarks for School CLD Improvement

Effective career guidance intervention is a process which enables schools to equip individuals with a clearer understanding of themselves and their potential for future career development. It is important to help individuals to explore their career development needs at various points in their lives, understand the process of effective choice of a career, clarify their objectives for the future, and take appropriate action to implement these objectives. As an empowerment model for youth development, YDIF not only draws attention to different aspects of young people’s lives, but also serves as a valuable tool for professionals and stakeholders working with young people. It provides a guiding structure that helps them understand the different dimensions of youth development and informs their efforts to create supportive and nurturing environments. By adopting this youth development framework, practitioners can take a holistic approach to youth development, considering not only the individual characteristics of young people but also the external factors that influence their growth.

However, it is important to understand how the YDIF can be implemented within the school setting for maximizing its impact on young people’s lives, not only just career aspects. This exploratory research attempts to shed light that ‘implanting’ youth development strategies typically

YDIF, within a typical school environment is highly possible via a structured benchmarking approach (e.g., WSBA). Findings revealed that the WSBA outcomes are beneficial to students' career readiness and other social affective domains that are win-win benefitting to in-school academic studying aspects and personal whole person development (including CLD). According to the dataset, some positive impacts are academic-related items under the APASO domains (e.g., motivation, attitude to school, self-concept) as listed below:

- Perceived Competence Toward School Work*** (Attitude to School)
- Value Learning*** (Attitude to School)
- General Sense of Self-Efficacy*** (Self-concept)
- Need for Achievement in School *** (Motivation)

In a nutshell and under the umbrella of YDIF, HKBM can facilitate YDIF to better capture the personal attributes and personality characteristics of an individual and map the best choices for them to achieve the optimum out of the given scenarios. In other words, WSBA can facilitate schools to properly execute the school-based career education. HKBM makes YDIF working better in school contexts.

6 Conclusion: Exploratory Nature of this Study

Exploratory studies (often termed pilot and feasibility studies) play a crucial role in evaluating the feasibility and value of transitioning to more effective inquiry (Hallingberg et al., 2018). These studies serve as a fundamental step in gathering essential information that supports more comprehensive evaluations, ultimately leading to a reduction in time/resources and the mitigation of potential risks associated with the intervention. By conducting exploratory studies, researchers can obtain vital insights that contribute to the development of more robust evaluation methodologies, ensuring the optimization of resources and the minimization of potential adverse effects stemming from the intervention. Thereby, the study, like many of these inquiries regarding the effects of an intervention program needs to be explored with more appropriate research methods in more cohorts and enriched datasets.

As a first attempt, it paves the way for future studies into the impacts of HKBM. The project researchers are planning to continue to examine similar research questions in different sampling and data analysis methods based on the results of this random-size pilot study. The current student samples in the study are relatively small with little attention on school banding due to extremely low response from project schools during the COVID period. In the future, we will conduct further studies based on a more rigorous sampling process. In addition, the Career Readiness Index (Hong Kong version) (Dodd et al., 2022) may need to be further adjusted after this exploratory study. As the development of reliable and valid instruments and measures are suitable for diverse cultures

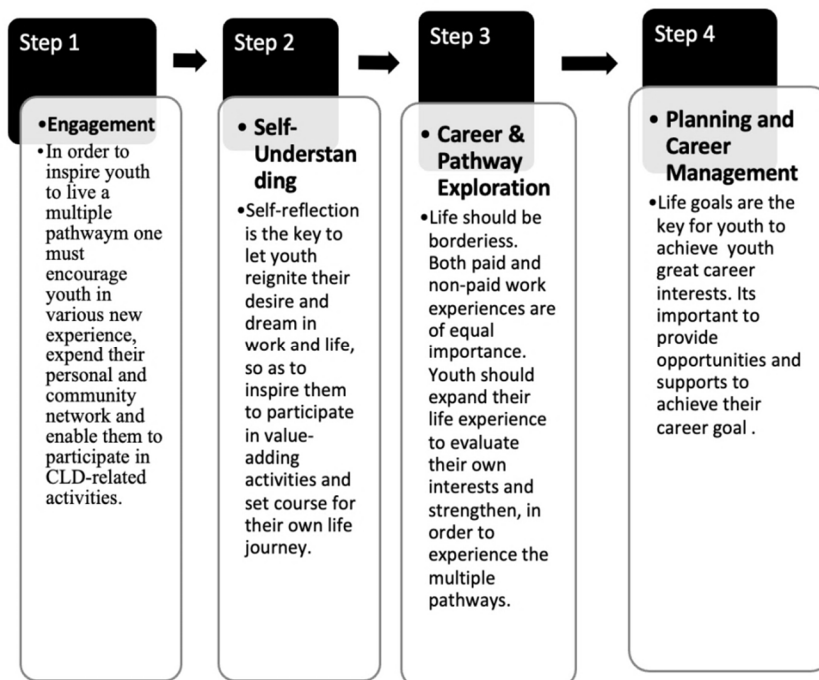
(Creed, Patton & Prideaux, 2006), cross-cultural researchers must ensure that the measures used are valid within their respective social and vocational contexts. This article focuses on the development of a career readiness measure specifically designed for use within the Hong Kong secondary school and education system. Career readiness in the Hong Kong context is highly influenced by factors such as the education system, cultural expectations, and the dynamics of the local labor market. By embracing indigenization of the measurements, career guidance practitioners and researchers can better meet the idiosyncratic needs of individuals within different cultural contexts, especially within other societies influenced by Confucian heritage culture (including Taiwan, South Korea, and Singapore) (Yip, Holman and Lam, 2024).

Note:

The YDIF primarily focuses on supporting young individuals during their transition from senior high school to various career and educational pathways. It is structured around four pillars that encompass the career development process (Leung, 2017):

- Engagement
- Self-understanding
- Career and Pathway Exploration pathways
- Planning and Career Management

Figure 6: Youth Development, and Intervention Framework



Resource: CLAP@JC Website (<https://clap.hk/home-intervention-model/>)

7. Acknowledgment

CLAP@JC is funded and created by the Jockey Club Charities Trust, and has given its support and permission to use project information and data in this article. CLAP@JC is a ten-year trust-initiated project and Hong Kong's cross-sectoral support platform on CLD, aiming to foster a sustainable ecosystem by bringing together the education, business, and community sectors to smoothen the transition from school to work for all youth. The project encourages youth to "Live Differently, Live Fully" and maximize their endless potential by setting sail on a unique life journey. For more information, please visit <https://clap.hk/>. The preliminary analysis was begun by the CLAP@JC Research (schools) team jointly led by Dr. Stephen Yip (the Project Director of the CLAP@JC) and Dr. Katty Ho (the research and evaluation director of the school project). Dr Ho left the project in late 2023, before being relaunched and conducted by the authors of this article, under the leadership of Dr Stephen Yip.

References

- CLAP@JC (n.d.). Youth Development and Intervention Framework (YDIF), CLAP Inform, May 10, 2017. Retrieved from <https://clap.hk/home-intervention-model/>
- CLAP@JC (2021). HKBM bulletin: The EduPaths, 1, July. <https://clap.hk/wp-content/uploads/2021/07/%E8%88%AA%E5%B0%8E.pdf>
- CLAP@JC (2023). Hong Kong benchmarks for career and life education: Highlights of school good practices. Hong Kong: CLAP@JC
- Conley, D. T. (2007). Toward a comprehensive conception of college readiness. Educational Policy Improvement Center.
- Creed, P., Patton, W., & Prideaux, L. A. (2006). Causal relationship between career indecision and career decision-making self-efficacy: A longitudinal cross-lagged analysis. *Journal of Career Development*, 33(1), 47–65.
- Dawis, R. V. (2002). Person-environment-correspondence theory. In D. Brown & Associate (Eds.), *Career choice and development* (4th ed., pp. 427–464). San Francisco, CA: Jossey-Bass.
- Dawis, R. V. (2005). The Minnesota theory of work adjustment. In S. D. Brown & R. T. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 3–23). Hoboken, NJ: Wiley.
- Dawis, R. V., & Lofquist, L. H. (1984). *A psychological theory of work adjustment*. Minneapolis, MN: University of Minnesota Press.
- Department for Education. (2017). *Careers strategy: Making the most of everyone's skills and talents*. [Online] Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664319/Careers_strategy.pdf

- Dodd, V., Hanson, J., & Hooley, T. (2022). Increasing students' career readiness through career guidance: Measuring the impact with a validated measure. *British Journal of Guidance & Counselling*, 50 (2), 260–272.
- Education Bureau (2017). Secondary Education Curriculum Guide. Hong Kong: Hong Kong Special Administrative Region Government.
- Enriquez, V. G. (1993). Developing a Filipino psychology. In U. Kim & J. W. Berry (Eds.), *Indigenous psychologies: Research and experience in cultural context* (pp. 152–169). Newbury Park, CA: Sage.
- Forrester, Jay W. (1961), *Industrial dynamics*. Cambridge, Mass.: Productivity Press.
- Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations [Monograph]. *Journal of Counseling Psychology*, 28, 545–579.
- Gottfredson, L. S. (1996). Gottfredson's theory of circumscription and compromise. In D. Brown & L. Brooks (Eds.), *Career choice and development: Applying contemporary approaches to practice* (3rd ed., pp. 179–232). San Francisco, CA: Jossey-Bass.
- Gottfredson, L. S. (2002). Gottfredson's theory of circumscription, compromise, and self-creation. In D. Brown & Associate (Eds.), *Career choice and development* (4th ed., pp. 85–148). San Francisco, CA: Jossey-Bass.
- Gottfredson, L. S. (2005). Applying Gottfredson's theory of circumscription and compromise in career guidance and counseling. In S. D. Brown & R. T. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 71–100). Hoboken, NJ: Wiley.
- Gysbers, N. C. (2000). Implementing a whole school approach to guidance through comprehensive guidance system. *Asian Journal of Counselling*, 7, 5–17.
- Hanson, J. & Neary, S. (2020). 'The Gatsby benchmarks and social mobility: impacts to date'. IAEVG Conference Proceedings Career Guidance for Inclusive Society. Bratislava Slovakia 11–13 September 2019. IAEVG Slovakia, pp.168–185.
- Hanson, J., Moore, N., Clark, L., & Neary, S. (2021). An evaluation of the North-east of England pilot of the Gatsby Benchmarks of Good Career Guidance: Final Report. International Centre for Guidance Studies, University of Derby.
- Hallingberg, B., Turley, R., Segrott, J., Wight, D., Craig, P., Moore, L., & Moore, G. (2018). Exploratory studies to decide whether and how to proceed with full-scale evaluations of public health interventions: a systematic review of guidance. *Pilot and feasibility studies*, 4, 1–12.
- Ho, Y. F. (2008). Reflections on school career education in Hong Kong: Responses to Norman C. Gysbers, Darryl Takizo Yagi, and Sang Min Lee & Eunjoo Yang. *Asian Journal of Counselling*, 15(2), 183–205.
- Holland, J. L. (1985). *Making vocational choices: A theory of vocational personalities and work environments* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

- Holland, J. H. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Holman, J. (2014). *Good careers guidance*. London: Gatsby Charitable Foundation.
<http://www.gatsby.org.uk/uploads/education/reports/pdf/gatsby-sir-john-holmangood-career-guidance-2014.pdf>
- Holman, J., & Yip, S. Y. W. (2020). *Developing benchmarks for career and life development in the UK and Hong Kong* [Manuscript]. Hong Kong: CLAP for Youth@JC Phase II Position Paper.
- Hong Kong Education Bureau. (2014). *Guide on life planning education and career guidance for secondary schools*. (2nd edition, 2021).
https://lifepanning.edb.gov.hk/uploads/page/attachments/CLP-Guide_E_r3.pdf
- Hong Kong Education Bureau. (2016). *A report on promotion of STEM education: unleashing potentials in innovation*. The Government of Hong Kong SAR.
https://www.edb.gov.hk/attachment/en/curriculum-development/renewal/STEM%20Education%20Report_Eng.pdf
- Hong Kong Education Bureau. (2019). *List of recommendations of the Task Force on Promotion of Vocational and Professional Education and Training*. Government of Hong Kong SAR.
https://www.edb.gov.hk/attachment/en/edu-system/other-edu-training/vocational-other-edu-program/VPET_TF_Recommendations_List_2019_e.pdf
- Hong Kong Education Bureau. (2022). *The enhanced school development and accountability framework*. Education Bureau Circular 154/2022. The Government of Hong Kong SAR.
<https://www.edb.gov.hk/attachment/en/sch-admin/sch-quality-assurance/circulars-letter/EDBC22015EN.pdf>
- Kelly, A., 2001. *Benchmarking for School Improvement: A Practical Guide for Comparing & Improving Effectiveness*. London: Routledge
- Lee, J. C. K. (2017). Curriculum reform and supporting structures at schools: Challenges for life skills planning for secondary school students in China (with particular reference to Hong Kong). *Educational Research for Policy and Practice*, 16 (1), 61–75.
- Lent, R. W. (2005). A social cognitive view of career development and counseling. In S. D. Brown & R. T. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 101–127). Hoboken, NJ: Wiley.
- Leung, S. A. (1995). Career counseling and development: A multicultural perspective. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 549–566). Thousand Oaks, CA: Sage
- Leung, S. A., & Chen, P. W. (2007). *Developing counseling psychology in Chinese communities in Asia: Indigenous, multicultural, and cross-cultural considerations*. Manuscript submitted for publication.

- Leung, S. A., & Hou, Z. J. (2005). The structure of vocational interest among Chinese students. *Journal of Career Development*, 32, 74–90.
- Leung, S. A. (2008). The big five career theories. In: J.A. Athanasou & R. Van Esbroeck, R. (Eds.) *International handbook of career guidance*. Dordrecht: Springer, Dordrecht.
- Leung, A. S. M. (2017). CLAP models – The youth development and intervention framework (YDIF). ‘CLAP Inform’. May 10, 2017, No. 2. Hong Kong: CLAP for Youth @ JC.
- Mann, A. & Huddleston, P. (2017). Schools and the twenty-first century labour market: Perspectives on structural change. *British Journal of Guidance and Counselling*, 45 (2), 208–218.
- Mann, A., Rehill, J., & Kashefpakdel, E. (2018). Employer engagement in education: Insights from international evidence for effective practice and future research. Education Endowment Foundation.
- McMahon, M., Watson, M., & Patton, W. (2015). The systems theory framework of career development: Applications to career counselling and career assessment. *Australian Journal of Career Development*, 24, 148–156.
- Moore, P. J., Mok, M. M. C., Chan, L. K. S., & Lai, P. Y. (2006). The development of an indicator system for the affective and social schooling outcomes for primary and secondary students in Hong Kong. *Educational Psychology*, 26 (2), 273–301.
- Morrow, S. W., Rakhsha, G., & Castaneda, C. L. (2001). Qualitative research methods for multicultural counseling. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (2nd ed., pp. 575–630). Thousand Oaks, CA: Sage.
- Ngai, S. S. Y., Cheung, C. K., Zhou, Q., Wang, L., Ng, Y. H., Leung, W. P. C., & Lee, H. C. H. (2023). Career and life development intervention for non-engaged youth: Evaluating the Hong Kong Benchmarks (Community) Pilot Program. *Frontiers in Psychology*, 14, 1117251.
- Pavlova, M., Lee, J.C.K., & Maclean, R. (2018). Transitions to post-school life: Responsiveness to individual, social and economic needs. In book series, *Education in the Asia-Pacific Region: Issues, Concern and Prospects* 41. Singapore: Springer.
- Senge, P. (2006). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Currency/Doubleday.
- Super, D. E., & Jordaan, J. P. (1973). Career development theory. *British Journal of Guidance and Counselling*, 1 (1), 3–16.
- Super, D. E. (1990). A lifespan, life-space approach to career development. In D. Brown, L. Brooks & Associates, *Career choice and development* (2nd ed.). (pp. 197-261). San Francisco: Jossey-Bass.

- Tam, C. H. L. (2015). Survey on career orientation and life planning of F.6 students in Hong Kong. Hong Kong: The Boys' & Girls' Clubs Association of Hong Kong. [Online] Available: http://www.bgca.org_hk/news.aspx?id!4e8568ed1-c4c3-4550-9a9e-462f9c81296a (19 December 2016) [In Chinese].
- Tsui, K. T., Lee, C. K. J., Hui, K. F. S., Chun, W. S. D., & Chan, N. C. K. (2019). Academic and career aspiration and destinations: A Hong Kong perspective on adolescent transition. *Education Research International*, 1–14.
- Wu, G. K. Y., & Mok, M. M. C. (2017). Social and emotional learning and personal best goals in Hong Kong. In E. Frydenberg, A. J. Martin, & R. J. Collie (Eds.), *social and emotional learning in Australia and the Asia-Pacific: Perspectives, programs and approaches* (pp. 219–231). Singapore: Springer Nature.
- Yip, S. Y. W., & Fung, J. C. C. (2019). “Ti yan shi xue xi” huo dong cheng xiao yan jiu: Di yi jie duan bao gao [Research on the effectiveness of “experiential learning” activities: Phase one report]. Hong Kong: Education Policy Research Centre, Hong Kong Policy Research Institute Ltd. (Abstract in English).
- Yip, S. Y. W. (2020). In search for effective career and life development: The map, friends and stories. CLAP@JC: <https://clap.hk/wp-content/uploads/2021/01/in-search-for-effective-career-and-life-development-the-map-friends-and-stories.pdf>
- Yip, S. Y. W. (2022). Career and life development in Hong Kong: A school improvement and benchmarking perspective. Unpublished manuscript.
- Yip, S. Y. W. (2024). Foreword: Stories about “from good to great”: The Hong Kong case of building a common systematic self-improvement model for career and life development in schools. In *Hong Kong benchmarks for career and life development (schools) case study 2024* (pp. 4–5). Hong Kong Jockey Club Charities Trust.
- Yip, S. Y. W., Holman, J. & Lam, C. M. (2024). Career and life planning education in Greater China: A Hong Kong case that brings east and west together. In Lee, J.C.-K., & Kennedy, K.J. (Eds.). *The Routledge International Handbook of Life and Values Education in Asia* (1st ed.). Routledge. pp. 140–156.