

Chapter 6

THE BIG FIVE CAREER THEORIES

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Career guidance and counselling in the western world, most notably in the United States (USA), has developed a comprehensive system of theories and intervention strategies in its more than 100 years of history. It began in the years of Frank Parson as a trait-factor approach in the early twentieth century (Betz, Fitzgerald, & Hill, 1989; Zunker, 2002), and slowly evolved to become a rather mature discipline today in the twenty-first century with a strong theoretical and empirical base, with the potential to further develop into a more “global” discipline in the years ahead. Indeed, vocational and career related issues are salient across different cultures and nationalities (Hesketh & Rounds, 1995; Leung, 2004). In an age of economic globalisation, all individuals are affected by an array of work related concerns, some of these concerns are unique to certain cultures, but others are common to many cultural groups. The search for life purposes and meanings, the journey to actualise oneself through various life and work-related roles, and the efforts by nations to deal with problems of employment and unemployment, are examples of universal issues that seem to affect many individuals from diverse cultures. Under the theme of career development, there are experiences, concerns, and issues that we could share, explore, and discussed at a global stage (Richardson, 1993; Lips-Wiersma & McMorland, 2006).

The development of career guidance and development into a global discipline requires a set of theoretical frameworks with universal validity and applications, as well as culture-specific models that could be used to explain career development issues and phenomenon at a local level. The focus of this chapter is on the five theories of career development that have guided career guidance and counselling practice and research in the past few decades in the USA as well as internationally. These five theories are (a) Theory of Work-Adjustment, (b) Holland’s Theory of Vocational Personalities in Work Environment, (c) the Self-concept Theory of Career Development formulated by Super and more recently by Savickas, (d) Gottfredson’s Theory of Circumscription and Compromise, and (e) Social Cognitive Career Theory. Given that the “big-five” theoretical models were developed by scholars in the USA, most of the existing reviews and summaries covering

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these frameworks (e.g., D. Brown & Associates, 2002; S. D. Brown & Lent, 2005; Swanson & Gore, 2000) have drawn from the literature in the USA. To augment the literature, this chapter will adopt an “international” perspective and will seek to selectively review studies conducted in regions around the world. With that as a backdrop, this chapter aims to achieve three objectives. First, to review the core conceptual propositions and the evolution of the “big five” career development models, and discuss specific components of these models that are attractive to international career guidance professionals. Second, to review recent international empirical work (that is, studies conducted outside of the USA) that has been done in relation to the “big five” career development models. Third, to discuss directions that researchers and practitioners could take to advance and “indigenise” the big five career theories in their own cultural regions.

Theory of Work Adjustment

The Theory of Work Adjustment (TWA) (Dawis, 2002, 2005; Dawis & Lofquist, 1984) is a class of theory in career development that is anchored on the individual difference tradition of vocational behaviour (Dawis, 1992) called person-environment correspondence theory, viewing career choice and development as continual processes of adjustment and accommodation in which: (a) the person (P) looks for work organisations and environments (E) that would match his/her “requirements” in terms of needs, and (b) E in turn looks for individuals who have the capabilities to meeting the “requirements” of the organisation. The term satisfaction is used to indicate the degree that P is satisfied with E, and satisfactoriness is used to denote the degree that E is satisfied with P. To P, the most central requirements to meet from E are his/her needs (or reinforcers), which could be further dissected into categories of psychological and physical needs that are termed values. To E, however, the most central requirements are abilities, which are operationalised as dimensions of skills that P possesses that are considered necessary in a given E. Overall, the degree of P’s satisfaction and E’s satisfactoriness would jointly predict P’s tenure in that work environment.

Recent formulations of TWA speculated on the effects of diverse adjustment styles that could be used to explain how P and E continuously achieve and maintain their correspondence (Dawis, 2005). Four adjustment style variables are identified, which are flexibility, activeness, reactivity, and perseverance. Flexibility refers to P’s level of tolerance to P-E dis-correspondence and whether he/she has a tendency to become easily dissatisfied with E. Activeness refers to whether P has a tendency to actively change or act on E to reduce dis-correspondence and dis-satisfaction. Reactiveness, conversely, refers to whether P would resort to self-adjustment in order to deal with dis-correspondence without actively changing or acting on E. Meanwhile, perseverance refers to P’s degree of resolve and persistence to adjust and accommodate before choosing to exit E. Similar adjustment styles also influence E’s approach to deal with dis-correspondence and dis-satisfactoriness.

Career choice and development is thus conceptualised as a continual process or cycles of work adjustment initiated by dis-satisfaction and dis-satisfactoriness.

A major strength of TWA is that a battery of measures has been developed to measure the various variables associated with the theory, including measures on satisfaction, needs and values, skills and abilities, satisfactoriness, and indexes of correspondence (Dawis, 2005). A large number of research studies have been conducted in the last few decades to examine the propositions derived from TWA, especially on the linkage between needs/abilities and satisfaction/satisfactoriness, and between work adjustment and tenure (Dawis, 2005).

International studies examining the TWA propositions yielded mostly mixed results. In a study by Tziner, Meir, and Segal (2002), Israeli military officers were administered measures of personality, general ability, and vocational interest. Measures of congruence were also computed based on the degree of match between interest and participants' field of job in the military. Ratings of performance from supervisors and peers were obtained and used as dependent variables. Overall, it was found that extroverted personality style and congruence were related to a higher level of performance ratings, which was consistent with TWA predictions. Contrary to expectation, general ability was not found to be a significant predictor of performance ratings. In another study by Feij, van der Velde, Taris, and Taris (1999), data were collected from Dutch young adults (ages ranged from 18 to 26) in two time points. Findings supported the linkage between congruence (defined as the match between vocational interest and perceived skills) and job satisfaction. However, contrary to TWA prediction, there was no significant difference between persons experiencing incongruence and persons experiencing congruence in their tendency to change jobs. Finally, consistent with TWA's assertion that vocational interest would become stable dispositions in adulthood, it was found that the congruence between interest and perceived skills among participants increased over time to become a stable pattern of interest.

An important direction for future research on TWA is the role of the adjustment styles in moderating work adjustment (Dawis, 2005). This was done in a study by Griffin and Hesketh (2003) with research participants from two organisations in Australia. Exploratory factor analysis was performed on two sets of items related to (a) supervisor's ratings of employee's adaptive performance, and (b) employee's ratings of work requirements biodata (i.e., perceptions of required adaptive behaviour at work) and self-efficacy for behaving adaptively. The results yielded a clear proactive factor and a reactive factor, according to TWA propositions, but a tolerant factor did not clearly emerge from the data. It was also found that adaptive performance was related to self-efficacy for adaptive behaviour. In one of the organisations, work requirements biodata and adaptability-related personality were predictive of adaptive performance, consistent with the prediction from TWA.

Taken as a whole, TWA seeks to explain career development and satisfaction in terms of person-environment correspondence, and it offers career guidance professionals a template to locate entry points to assist individuals with career choice and adjustment concerns. Meanwhile, the TWA propositions are testable in cross-cultural settings, even though many of the instruments developed to operationalise

the TWA variables were developed in the USA and should be validated in other cultures before being used for hypothesis testing.

Holland's Theory of Vocational Personalities in Work Environment

In the past few decades, the theory by Holland (1985, 1997) has guided career interest assessment both in the USA and internationally. The theory by Holland offers a simple and easy-to-understand typology framework on career interest and environments that could be used in career counselling and guidance. Holland postulated that vocational interest is an expression of one's personality, and that vocational interests could be conceptualised into six typologies, which are Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). If a person's degree of resemblance to the six vocational personality and interest types could be assessed, then it is possible to generate a three-letter code (e.g., SIA, RIA) to denote and summarise one's career interest. The first letter of the code is a person's primary interest type, which would likely play a major role in career choice and satisfaction. The second and third letters are secondary interest themes, and they would likely play a lesser but still significant role in the career choice process.

Parallel to the classification of vocational interest types, Holland (1985, 1997) postulated that vocational environments could be arranged into similar typologies. In the career choice and development process, people search for environments that would allow them to exercise their skills and abilities, and to express their attitudes and values. In any given vocational environment, there is a tendency to shape its composition so that its characteristics are like the dominant persons in there, and those who are dissimilar to the dominant types are likely to feel unfulfilled and dissatisfied. The concept of "congruence" is used by Holland to denote the status of person-environment interaction. A high degree of match between a person's personality and interest types and the dominant work environmental types (that is, high degree of congruence) is likely to result in vocational satisfaction and stability, and a low degree of match (that is, low congruence) is likely to result in vocational dissatisfaction and instability. The person-environment congruence perspective in Holland's theory is quite similar to TWA's concept of correspondence.

The six Holland interest typologies are arranged in a hexagon in the order of RIASEC, and the relationship between the types in terms of similarities and dissimilarities are portrayed by the distance between corresponding types in the hexagon. The concept of consistency is used as "a measure of the internal harmony or coherence of an individual's type scores" (Spokane & Cruza-Guet, 2005, p. 24). Accordingly, types that are adjacent to each other in the hexagon have the highest degree of similarity in terms of their personality characteristics and vocational orientations, types that are opposite in the hexagon have the least degree of similarity, and types that are separated by one interval have a moderate degree of similarity. A simple way to determine the consistency of an interest code is to

look at the distance between the first two letters of the code in the Holland hexagon (high, moderate, or low consistency).

In addition to congruence and consistency, another major concept in Holland's theory is differentiation. Differentiation refers to whether high interest and low interest types are clearly distinguishable in a person's interest profile. An interest profile that is low in differentiation resembles a relatively flat line in which high and low interest types are not distinctive. In contrast, a differentiated interest profile has clearly high and low scores, suggesting that the crystallisation of interest might have occurred, and readiness for career choice specification and implementation.

Holland's theory has an enormous impact on career interest assessment and research (Spokane, Meir, & Catalano, 2000). In the 40 years since Holland's theory was proposed, hundreds of research studies have been published to examine Holland's propositions and the validity of interest instruments that were based on his theory, including some studies using international samples. A major area of investigation among cross-cultural studies was whether Holland's proposed structure of vocational interests was valid across cultures (e.g., Rounds & Tracey, 1996). For example, Tak (2004) administered the Strong Interest Inventory to Korean college students, and findings from multi-dimensional scaling and test of randomisation suggested a good fit with Holland's circular model of interest, even though the shape of interest arrangement was not clearly hexagonal. In another study by Sverko and Babarovic (2006), a Croatian version of Holland's Self-Directed Search (SDS) was administered to 15–19 years old Croatian adolescents. The general findings using randomisation tests and factor-analytic techniques were supportive of Holland's circular model, even though the degree of fit was higher for older age groups. However, findings from some other international studies suggested that the six interest types tended to cluster in forms that reflect idiosyncratic cultural values and occupational/educational perceptions within a cultural context (e.g., Law, Wong, & Leong, 2001; Leung & Hou, 2005; du Toit & de Bruin, 2002). For example, Leung and Hou (2005) administered the SDS to Chinese high school students in Hong Kong and findings from exploratory and confirmatory factor analyses suggested that there were six first-order factors clustered into three groups, which were Realistic-Investigative, Artistic-Social, and Social-Enterprising-Conventional. Leung and Hou (2005) suggested that the clustering might reflect characteristics of high school curriculum in Hong Kong (that is, the assignment of students into science, arts, and business curriculum), as well as the centrality of social relationships in Chinese culture. In summary, there was mixed support for Holland's structure of vocational interests across cultures. The clustering of the types was affected by specific cultural values and perceptions.

Given the increasing need for vocational interest assessment in different cultural contexts, there is a need to conduct more research studies to examine the cross-cultural validity of Holland's theory and the various interest assessment instruments developed. In addition to studies on vocational interest structure, research studies should examine other aspects of Holland's propositions, such as those related to type characteristics, work environment, and the predictive validity of career interest.

Most important of all, the utility of an interest assessment tool is dependent on whether interest test scores obtained could help a test taker identify directions for occupational and educational exploration. In the USA, occupations and educational opportunities (e.g., college majors) have been translated into Holland codes (e.g., Holland, 1996), and test takers can conveniently locate these codes from readily available printed or internet sources. However, occupational and educational classification resources developed in the USA cannot be adopted in full in another region without adaptation to match with local occupational and educational characteristics. Hence, the challenge for international scholars is not only to develop and adapt instruments so that they are consistent with their cultural contexts, but also to develop occupational and educational codes and resources that could benefit local users (Leung, 2004).

Self-concept Theory of Career Development

Among the many theories of career choice and development, the theory by Super has received much attention in the USA as well as in other parts of the world. Super (1969, 1980, 1990) suggested that career choice and development is essentially a process of developing and implementing a person's self-concept. According to Super (1990), self-concept is a product of complex interactions among a number of factors, including physical and mental growth, personal experiences, and environmental characteristics and stimulation. Whereas Super presumed that there is an organic mechanism acting behind the process of development and maturation, recent articulations (e.g., Herr, 1997; Savickas, 2002) of Super's theory have called for a stronger emphasis on the effects of social context and the reciprocal influence between the person and the environment. Building on Super's notion that self-concept theory was essentially a personal construct theory, Savickas (2002) took a constructivist perspective and postulated that "the process of career construction is essentially that of developing and implementing vocational self-concepts in work roles" (p. 155). A relatively stable self-concept should emerge in late adolescence to serve as a guide to career choice and adjustment. However, self-concept is not a static entity and it would continue to evolve as the person encounters new experience and progresses through the developmental stages. Life and work satisfaction is a continual process of implementing the evolving self-concept through work and other life roles.

Super (1990) proposed a life stage developmental framework with the following stages: growth, exploration, establishment, maintenance (or management), and disengagement. In each stage one has to successfully manage the vocational developmental tasks that are socially expected of persons in the given chronological age range. For example, in the stage of exploration (ages around 15 to 24), an adolescent has to cope with the vocational developmental tasks of crystallisation (a cognitive process involving an understanding of one's interests, skills, and values, and to pursue career goals consistent with that understanding), specification (making tentative and specific

career choices), and implementation (taking steps to actualise career choices through engaging in training and job positions). Examples of vocational developmental tasks in each of the developmental life stages are described in Super (1990). Accordingly, the concept of “career maturity” was used to denote the degree that a person was able to fulfil the vocational developmental tasks required in each developmental stage. Partially due to the mixed results obtained in empirical research studies on career maturity, there have been suggestions to replace career maturity with the concept of adaptability (e.g., Herr, 1997; Savickas, 1997, 2002, 2005).

Whereas the above vocational developmental stages are likely to progress as maxi-cycles in a person’s life journey, Super (1990) postulated that a mini-cycle consisting of the same stages from growth to disengagement would likely take place within each of the stages, particularly when a person makes transition from one stage to the next. In addition, individuals would go through a mini-cycle of the stages whenever they have to make expected and unexpected career transitions such as loss of employment or due to personal or socioeconomic circumstances (Savickas, 2002).

The contextual emphasis of Super’s (1980, 1990) theory is most clearly depicted through his postulation of life roles and life space. Life at any moment is an aggregate of roles that one is assuming, such as child, student, leisurite, citizen, worker, parent, and homemaker. The salience of different life roles changes as one progresses through life stages, yet at each single moment, two or three roles might take a more central place, while other roles remain on the peripheral. Life space is the constellation of different life roles that one is playing at a given time in different contexts or cultural “theatres”, including home, community, school, and workplace. Role conflicts, role interference, and role confusions would likely happen when individuals are constrained in their ability to cope with the demands associated with their multiple roles.

Super was instrumental in developing the international collaborative research work called Work Importance Study (WIS) aiming to study work role salience and work values across different cultures. The WIS involved multiple nations in North America, Europe, Africa, Australia and Asia, and resulted in measures of work roles and work values with similar structure and constructs (see Super & Sverko, 1995 for a summary of the WIS).

Many aspects of Super’s theory are attractive to international career guidance professional and researchers, including concepts such as vocational developmental tasks, developmental stages, career maturity and life roles. It offers a comprehensive framework to describe and explain the process of vocational development that could guide career interventions and research. The recent anchoring of the theory on developmental contextualism takes into consideration the reciprocal influence between the person and his/her social ecology, including one’s culture. Likewise, the conceptualisation of career choice and development as a process of personal and career construction recognises the effects of subjective cultural values and beliefs in shaping vocational self-concepts and preferences.

A good portion of the international research studies on Super’s theory have used career maturity as one of the major variables (see a review by Patton & Lokan, 2001). Career maturity was examined in two recent studies conducted in Australia.

Patton, Creed, and Muller (2002) administered to Grade 12 students the Australian version of the Career Development Inventory (CDI-A) (Lokan, 1984) and a measure of psychological well-being. These students were surveyed on their educational and occupational status 9 months after they graduated. Findings supported the hypotheses that students who proceeded to full-time study would have higher levels of career maturity (operationally defined as having high CDI-A scores), school achievement and psychological well-being while still at school, in compared to students who did not make a smooth transition to work or education after high school. The authors suggested that there was a strong need for school-based intervention to assist students who might not be transitioning to full-time studies after high school. In a different study by Creed and Patton (2003), CDI-A was administered to high school students from Grade 8 to Grade 12, along with several other career-related measures including career decision-making self-efficacy, career decidedness, work value, self-esteem and work commitment. Regression analyses were conducted and it was found that self-efficacy, age, career decidedness and work commitment were the main predictors of career maturity attitudes (CDI-A attitude scales), whereas age, gender, career certainty, work commitment, and career indecision were the main predictors of career maturity knowledge (CDI-A knowledge scales). Differences in career maturity scores were also found among students in different grade levels. These findings were consistent with the developmental assumptions of career maturity.

Repetto (2001) reported a study using a Spanish version of the Career Development Inventory (CDI) to measure the career maturity of high school students (7th grade to 12th grade) enrolled in a career intervention program called *Tu Futuro Profesional (TFP, meaning Your Future Career)*. The intervention was designed according to Super's conceptualisation of career maturity, with the following components: self-awareness, decision-making, career exploration, and career planning and management. A pretest-posttest design was used, and findings from treatment groups were compared to those from control groups. The results suggested that the intervention was highly effective in elevating the career maturity of students in all the grade levels.

In addition to career maturity, there are other aspects of Super's theory that need to be examined across cultures. For example, self concept is a prominent feature of Super's theory, and the implementation of one's interests, values, and skills in a work role is instrumental to vocational development and satisfaction. However, there are cultural variations in the importance of self in decision-making, and in some cultures important life decisions such as career choices are also subjected to considerations that are familial and collective in nature. In order to maximise self-fulfilment and social approval, one has to negotiate with the environment to locate the most acceptable solutions and option (Leung & Chen, 2007). Consequently, career choice and development is not a linear process of self-concept implementation, but a process of negotiations and compromises in which both the self and one's environment have to be consulted. The concept of life role can also be useful in understanding the cultural dynamics involved the career choice process. Values such filial piety, family harmony, and loyalty might influence how the personal self

is constructed, and the salience and importance of different life and work roles as well as their dynamic interactions.

Even though international research on Super's theory is still very much needed, Super's theory will continue to play an important role in career development practice internationally (e.g., Leong & Serafica, 2001; Patton & Lokan, 2001). Super's influence is best illustrated by an article by Watanabe-Muraoka, Senzaki, and Herr (2001) who commented that Super's theory "has received wide attention by Japanese practitioners, not only in academic settings but also in business, as a source of key notions in the reconsideration of the human being and work relationship in the rapidly changing work environment in contemporary Japan" (p. 100).

Gottfredson's Theory of Circumscription and Compromise

In compared to the more established career development frameworks such as Super's and Holland's theories, Gottfredson's theory of career development is a more recent contribution. Gottfredson (1981, 1996, 2002, 2005) assumed that career choice is a process requiring a high level of cognitive proficiency. A child's ability to synthesise and organise complex occupational information is a function of chronological age progression as well as general intelligence. Cognitive growth and development is instrumental to the development of a cognitive map of occupation and conceptions of self that are used to evaluate the appropriateness of various occupational alternatives.

In recent revisions of her theory, Gottfredson's (2002, 2005) elaborated on the dynamic interplay between genetic makeup and the environment. Genetic characteristics play a crucial role in shaping the basic characteristics of a person, such as interests, skills, and values, yet their expression is moderated by the environment that one is exposed to. Even though genetic makeup and environment play a crucial role in shaping the person, Gottfredson maintained that the person is still an active agent who could influence or mould their own environment. Hence, career development is viewed as a self-creation process in which individuals looked for avenues or niches to express their genetic proclivities within the boundaries of their own cultural environment.

In contrast to the established notion that choice is a process of selection, Gottfredson's (1981, 1996, 2002) theorised that career choice and development could instead be viewed as a process of elimination or circumscription in which a person progressively eliminates certain occupational alternatives from further consideration. Circumscription is guided by salient aspects of self-concept emerging at different developmental stages. Gottfredson maintained that the career aspirations of children are influenced more by the public (e.g., gender, social class) than private aspects of their self-concept (e.g., skills, interests). A developmental model was proposed consisting of four stages of circumscription. The first is called "orientation to size and power" (ages 3–5), and the child perceives occupations as roles taken up by big people (adults). The second stage is called "orientation to sex-roles"

(ages 6–8), and in this stage sex-role norms and attitudes emerge as defining aspect of a child's self-concept. The child evaluates occupations according to whether they are appropriate to one's sex, and eliminates from further consideration alternatives that are perceived to be gender inappropriate (i.e., the wrong sex-type). The third stage is called "orientation to social valuation" (ages 9–13) as social class and status become salient to a child's developing self-concept. Accordingly, the emerging adolescent eliminates from further consideration occupations that are too low (i.e., occupations with unacceptable prestige levels) or too high (i.e., high prestige occupations beyond one's efficacy level) in prestige. The fourth stage is called "orientation to the internal, unique self" (ages 14 and above), in which internal and private aspects of the adolescent's self-concept, such as personality, interests, skills, and values, become prominent. The young adolescent considers occupations from the remaining pool of acceptable occupations according to their suitability or degree of match with one's internal self.

Another career development process is compromise. In response to external realities and constraints such as changes in the structure of the labour market, economic depression, unfair hiring practices, and family obligations, individuals have to accommodate their occupational preferences so that their eventual choices are achievable in the real world. Compromise is a complex process in which compatibility with one's interest is often compromised first so as to maintain a greater degree of correspondence with one's preference for prestige and sex-type.

Since its inception in 1981, Gottfredson's theory has only received limited attention in the empirical literature. Almost all the published research studies examining Gottfredson's theory have used samples in the USA, and a search of the literature using PSYINFO yielded no research studies with international samples. Gottfredson's theory is difficult to test empirically mainly because (a) most of the hypothesised variables, such as sex-type, prestige, circumscription, and compromise, are difficult to operationalise, and (b) the hypothesised developmental process should ideally be tested via longitudinal research design requiring substantial time and resources. In a review article of major career development theories, Swanson and Gore (2000) commented that Gottfredson theory "is one of the few attempts to study specifically the period corresponding to Super's growth stage. However, it essentially remains quite difficult to test the theoretical propositions, and unfortunately, an untestable theory is not particularly useful" (p. 243).

Nevertheless, the theory by Gottfredson still offers unique perspectives to career guidance professionals internationally. For instance, in many cultures life accomplishment is measured by successes in education and public examinations and attainment in career positions that have high social status and influence. Likewise, gender stereotype is also a part of many cultures (e.g., Asian cultures), and individuals are encouraged to pursue occupations that are perceived to be compatible to their gender (Leung, 2002). Hence, Gottfredson's theory offers a framework in which the influence of prestige and sex-type could be understood in diverse cultural contexts.

Meanwhile, as career guidance interventions are becoming more central in primary and secondary schools around the world (Gysbers, 2000), the theory by Gottfredson could be used as a conceptual guide to program development. Gottfredson

(2005) outlined a model of career guidance interventions aiming to reduce risk and enhance development, encouraging positive adaptation in relation to cognitive growth, self-creation, circumscription, and compromise. The model consisted of counsellor strategies and tools that could be used to optimize (a) learning and the use of complex occupational information, (b) experience and activities that allow children and adolescents to understand their career-related personal traits, (c) self-insight to construct and conceptualise a future career path that is realistic and feasible, and (d) wisdom in self-investment to elevate the odds of successfully implementing preferred career options. These broad strategies are applicable to a variety of cultural contexts in which opportunities exist for career interventions in school settings.

Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT) (Lent, Brown, & Hackett, 2002; Lent, 2005) is anchored in Bandura's self-efficacy theory (1977, 1997), which postulated a mutually influencing relationship between people and the environment. SCCT offers three segmental, yet interlocking process models of career development seeking to explain (a) the development of academic and vocational interest, (b) how individuals make educational and career choices, and (c) educational and career performance and stability. The three segmental models have different emphasis centring around three core variables, which are self-efficacy, outcome expectations, and personal goals.

Lent (2005) defined self-efficacy as "a dynamic set of beliefs that are linked to particular performance domains and activities" (p. 104). Self-efficacy expectations influence the initiation of specific behaviour and the maintenance of behaviour in response to barriers and difficulties. Consistent with early formulation by Bandura (1977) and others (e.g., Hackett & Betz, 1981; Betz, Borgen, & Harmon, 1996), SCCT theorised that self-efficacy expectations are shaped by four primary information sources or learning experiences, which are personal performance accomplishments, vicarious learning, social persuasion, and physiological and affective states. Lent (2005) suggested that of the four sources of information or learning experience, personal performance accomplishments have the most powerful influence on the status of self-efficacy.

Lent, Brown, and Hackett (2002) defined outcome expectations as "personal beliefs about the consequences or outcomes of performing particular behavior" (p. 262). Outcome expectations include beliefs about extrinsic reward associating with performing the target behaviour, self-directed consequences, and outcomes derived from task performance. Overall, it is hypothesised that an individual's outcome expectations are formed by the same information or learning experiences shaping self-efficacy beliefs.

Personal goals refer to one's intention to engage in certain activity or to generate a particular outcome (Lent, 2005). SCCT distinguished between choice content goals, referring to the choice of activities to pursue, and performance goals, referring to the level of accomplishment or performance one aims to attain. Through

setting personal goals, individuals could persist in tasks and sustain their behaviour for a long time in the absence of tangible external rewards or reinforcement.

Self-efficacy, outcome expectations, and personal goals served as core variables in the interest, choice, and performance models of SCCT. The interest model specifies that individuals would likely develop interest in activities that (a) they feel efficacious and (b) anticipate that there would be positive outcomes associated with the activities. The dynamic interaction among interest, self-efficacy, and outcome expectations would lead to the formation of goals and intentions that serve to sustain behaviour over time, leading to the formation of a stable pattern of interest in adolescence or early adulthood.

The SCCT choice model views the development of career goals and choices as functions of the interaction among self-efficacy, outcome expectations and interest over time. Career choice is an unfolding process in which the person and his/her environment mutually influence each other. It involves the specification of primary career choice or goal, actions aiming to achieve one's goal, and performance experience providing feedback to the individual on the suitability of goal. In addition, SCCT posited that compromises in personal interests might be required in the career choice process due to contextual immediate to the person (e.g., cultural beliefs, social barriers, lack of support).

An "ability" factor, defined as one's achievement, aptitude, and past performance, was highlighted in the performance model of SCCT. Ability serves as feedback from reality to inform one's self-efficacy and outcome expectation, which in turn would influence performance goals and levels. Lent (2005) suggested that incongruence between efficacy and objective ability (e.g., over-confidence, under-confidence) would likely lead to undesirable performance (e.g., ill-prepared for task, performance anxiety). An optimal point is a slightly overshoot self-efficacy which would promote further skills utilisation and development.

SCCT offers a comprehensive framework to understand the development of career interest, career choice, and performance that is grounded in self-efficacy theory. In the past decade, SCCT has generated a large number of research studies, including some studies conducted with international samples (e.g., Arulmani, Van Laar, & Easton, 2003; Hampton, 2005; Patton, Bartrum, & Creed, 2004). For example, a study by Nota, Ferrari, Solberg, and Soresi (2007) used a SCCT framework to examine the career development of Italian youths attending a university preparation program in Padua Province. The authors found a positive relationship between the career search self-efficacy of participants and family support, and a negative relationship between career search self-efficacy and career indecision. For male students, the relationship between family support and career indecision was partially mediated by career search self-efficacy. These findings were consistent with the general SCCT career choice models, and illustrated the importance of social support to career decision and efficacy.

Findings from a study by Creed, Patton, and Prideaux (2006) on high school students in Australia were less supportive of the process model of SCCT. Eighth graders were administered measures of career decision-making self-efficacy and

career decision and then again on Grade 10. Contrary to theoretical expectations, changes in career decision-making self-efficacy over time were not associated with similar changes in career indecision, and vice versa. The authors suggested that a causal linkage between the two variables as hypothesised by the SCCT process model might not exist and that early self-efficacy status might not buffer a person from future career decision-making conflicts.

Overall, SCCT offers international career guidance practitioners and researchers an overarching framework to guide practice, as well as tangible propositions and hypotheses that could be tested empirically. In addition to hypotheses testing, efforts are needed to develop or adapt existing instruments so that variables associated with SCCT could be tested via measures that are valid and reliable across cultures.

Indigenisation of Career Theories

The big five career theories are all developed in the USA but as evident from the review above, they have served to guide career guidance practice and research internationally. Even though the big five theories have been revised and updated in response to emerging research evidence and social changes, they are still conceptually and empirically anchored in the social and occupational contexts of the USA, and career guidance practitioners and researchers should be careful not to transport these theories to their own contexts without cultural adaptation and modifications (Leung, 1995).

A review of the conceptual literature in career development suggested that very few career development theories have emerged from regions outside the USA. In order to advance the career guidance discipline worldwide, there should be more “indigenous” efforts to develop theories and practice that would meet the idiosyncratic needs in diverse geographic regions. Indigenisation of career and guidance theory and practice should aim to identify the universals as well as the unique experience, constructs and practice that are specific to particular culture groups.

The conceptualisation on indigenisation by Enriquez (1993) could be used to guide the indigenisation of career development theories. Indigenisation of the career guidance discipline could take the route of *indigenisation from within* and *indigenisation from without*. Indigenisation from within refers to the derivation of career theories, concepts, and methods from within a specific culture, relying on indigenous sources of information as the primary source of knowledge. This process would result in career development concepts that have specific meanings within a culture (e.g., the effects of filial piety on career choice in Asian cultures), and career guidance and counseling methods that are grounded on specific cultural features, practice, and beliefs (e.g., application of instruments with culture-specific dimensions). On the other hand, indigenisation from without involves modifying existing career theories and practice (e.g., big five career theories) to maximise their degree of fit with local cultural contexts. Hence, the main objectives would be to identify aspects of these

theories that are relevant/irrelevant and valid/invalid for specific cultures, and to articulate on necessary cultural adaptations both conceptually and in practice.

Three steps can be identified that should be taken to indigenise career development theories from without. First, international scholars in career guidance should examine how culture might intervene, moderate, or mediate the hypothesised career development and choice process. This would involve critically evaluating these respective theories to determine (a) how the target variables (e.g., work adjustment, interest, compromise, life roles, and self-efficacy) are being understood in a particular cultural context, and how such understanding is similar to or different from those proposed by the theory, (b) if the relationship among the hypothesised variables are valid in that cultural context, and how cultural beliefs, values, and practices might influence the process, yielding a different set of propositions or configuration among the variables, and (c) if there are indigenous, culture-specific variables that could be integrated into the career development frameworks that would increase the explanatory power and comprehensiveness of theories. In conducting research studies related to the above themes, divergent research methodologies should be considered, including quantitative and qualitative methods. Qualitative methods are particularly meaningful as they would likely yield rich, comprehensive, and in-depth data that could lead to theory building and the development of indigenous conceptual frameworks (e.g., Morrow, Rakhsha, & Castaneda, 2001).

Second, career guidance scholars should develop instruments and measures that are reliable and valid for diverse cultures. The big five career theories were developed in the USA and naturally most of the measures associated with these theories were based on the US cultural, social, and occupational characteristics. In order to examine the validity of career theories across cultures, as a first step, cross-cultural researchers should develop instruments that are valid in their social and vocational contexts. Cross-cultural researchers have to make a choice between developing their own measures from scratch, or to adapt existing measures developed in the West (Leung, 2002). Developing a measure from scratch is often an expensive and time-consuming endeavour, and adapting existing measures seems a most viable option. The goal of adaptation is to eliminate culture-based biases that might threaten the validity of instruments (Van de Vijver & K. Leung, 1997), including biases related to how vocational constructs are expressed and defined, response style, and item-content (Leung, 2004). Essentially, the adaptation of career measures for a particular cultural group should involve one of the following levels of modifications: (a) adopt an established measure with only minimal modification, mainly to establish language equivalence through using a back-translation strategy to translate the items into the language of the target culture (e.g., Goh & Yu, 2001), (b) conduct psychometric evaluation of the target measures to decide if the structure and properties of the instrument correspond to those reported in the literature so that cross-cultural equivalence of scales could be established (e.g., Creed, Patton, & Watson, 2002; Tien, 2005), and if necessary, the content and structure of the measure would be modified based on empirical findings, and (c) revise and adapt the target measure, incorporating key cultural elements into the measure that are core to the concepts being measured in the local context, and conduct psychometric

evaluation of the modified measure. The development of culturally valid measures is an important pre-requisite toward cross-cultural testing of career development theories.

The third step to indigenise career theories from within is the development of theory-based career guidance interventions in cross-cultural settings, incorporating cultural adaptations that are based on local social, cultural, and occupational features (e.g., Repetto, 2001). It is important for the adaptations to be clearly documented so that further refinements and modifications could be done in future cycles of interventions and evaluation. The outcomes of these interventions would shed light on the usefulness and relevance of various cultural adaptations, and would provide important clues to the cross-cultural validity of career theories.

Summary and Conclusion

In this chapter, the central tenets of the “big five” career theories and selected international research studies are reviewed. The big-five theories offer career guidance professionals worldwide a set of principles and concepts that they could use to communicate about practice and research. Locating the universals of career guidance and development across culture is indeed important, yet career guidance practitioners and researchers should critically evaluate the cross-cultural limitations of these theories and to identify points of divergence, including the cultural relevance of theoretical constructs, assessment methods, and the content and design of career interventions based these theoretical perspectives.

There should be more international collaborations to further develop the big five career development theories, both in research and practice (Leung, 2003). Long-distance international collaborations, such as collaborative data collection, theory-based interventions, and documentations of cross-cultural research and practice initiatives, were difficult to accomplish because of tangible social, political, and geographic barriers. However, with advances in communication technology and the emergence of the internet platform (Friedman, 2006), it is considered that such collaborations are now much easier to implement. The big-five career theories offer international career guidance professionals a collection of frameworks on which they could anchor and advance the career guidance discipline locally and globally.

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