Effects of Parental Contextual Influences on Adolescent Career Aspirations and Career Actions in a Collectivist Cultural Setting

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ABSTRACT

Using a series of three studies, this research program had three objectives: (1) to develop a new measure to assess congruence between parents and their adolescents regarding career matters, (2) to test the cross-sectional associations between selected proximal parental contextual variables (i.e., parental career expectations and adolescent-parent career congruence) and career aspirations and career actions of planning and exploration within the social cognitive career choice model, and (3) to investigate the longitudinal relationships among the study variables. All studies were based on children from a collectivist cultural context (i.e., Indonesia). This research program has been structured around three empirical studies reported in three journal articles.

Study 1 presents the development and initial validation of the Adolescent-Parent Career Congruence Scale. This study involved focus groups, generation of items, and an expert review to develop 20 items considered suitable to assess adolescent-parent career congruence. In the second phase, the items were administered to 1062 Indonesian high school students. Item analysis and exploratory factor analysis were conducted on the first half of the randomly split sample (550 students: 53.1% girls, mean age = 15.94 years, $SD = .52$). These analyses reduced the number of items to 12, which represented two reliable subscales. Third, a confirmatory factor analysis with the hold-out sample (512 students: 55.9% girls, mean age = 15.92 years, $SD = .49$) confirmed the initial structure of the new scale. Last, construct validity of the newly devised scale was assessed by testing the correlations between the Adolescent-Parent Career Congruence Scale with measures of parental support, living up to parental expectations (academic achievement subscale), and life satisfaction. Following a standard pattern for psychometric instruments, these stages produced a valid and reliable 12-item scale, which includes (a) a 7-item complementary congruence subscale to measure how well the adolescents perceive their needs to be satisfied by parents in the career field, and
reciprocally, perceptions of how happy or satisfied the parents are with their adolescent children’s career-related progress, and (b) a 5-item supplementary congruence subscale to measure the similarity in career-related values and direction between the adolescent and the parents.

Study 2 reports the cross-sectional associations between parental career expectations and adolescent-parent career congruence and career aspirations and the career actions of planning and exploration. The study was informed by the social cognitive career choice model and involved a sample of 351 Grade 10 Indonesian high school students (53.3% girls, mean age 15.93 years, $SD = .51$). Social cognitive career theory (Lent et al., 1994) holds that proximal contextual variables have direct effects on individuals’ career goals and career actions, whereas Bandura’s (1999, 2000) general social cognitive theory proposes that these variables influence career goals directly and indirectly by way of self-efficacy, and influence career actions indirectly by way of self-efficacy and goals. Bandura’s and Lent’s approaches were integrated in developing hypotheses. Findings demonstrated a variety of routes by which parental career expectations and adolescent-parent career congruence linked to adolescents’ career aspirations and the career actions of planning and exploration. Partial mediation effects were found for the relationships between parental career expectations and career aspirations and career exploration, and full mediation effects were found for the associations between both parental variables and career planning, and for those between adolescent-parent career congruence and career aspirations and career exploration.

Finally, Study 3 reports the longitudinal relationships among the study variables. This study involved a sample of 954 Indonesian high school students (55.8% girls; mean age = 16.43, $SD = .49$), who were surveyed in Grade 10 and six months later when they were in Grade 11. The results revealed that the reciprocal model was the best-fitting model. This model showed that parental career expectations explained
significant variance in later career aspirations and career planning, and together with career aspirations, adolescent-parent career congruence was found to be associated with future career exploration. While self-efficacy and outcome expectations were reciprocally linked over time, self-efficacy served as an across-time correlate of both parental variables, and career exploration was found to be correlated with later self-efficacy. In addition, career planning was found to be associated with future outcome expectations. The implications of these three empirical studies are highlighted and recommendations for future research are discussed.
STATEMENT OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and beliefs, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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Dian Ratna Sawitri

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LIST OF PUBLICATIONS ARISING FROM THIS RESEARCH PROGRAM

Journal Articles

(Listed in order in which these Articles Appear in this Thesis)


Posters


STATEMENTS FROM AUTHORS

CONFIRMING THE AUTHORSHIP CONTRIBUTION OF THE PHD CANDIDATE ON THE JOURNAL ARTICLES

Paper 1

As co-authors of the paper entitled “The Adolescent-Parent Career Congruence Scale: Development and Initial Validation”, we confirm that Dian Ratna Sawitri has made the following contributions:

a. Designing the questionnaire items with direction and feedback from co-authors.
b. Collecting and entering the data into the statistical software package.
c. Analysing and interpreting the data under the direction of co-authors.
d. Writing the paper with direction and feedback from co-authors.

Furthermore, we agree to the inclusion of the paper in this doctoral research program submitted for examination.

Dian R. Sawitri Date

Peter A. Creed Date

Melanie J. Zimmer-Gembeck Date
Paper 2

As co-authors of the paper entitled “Parental influences and adolescent career behaviours in a collectivist cultural setting”, we confirm that Dian Ratna Sawitri has made the following contributions:

a. Collecting and entering the data into the statistical software package.

b. Structuring the paper with direction from co-authors.

c. Conducting the data analyses with direction and feedback from co-authors.

d. Writing the paper with direction and feedback from co-authors.

Furthermore, we agree to the inclusion of the paper in this doctoral research submitted for examination.

Dian R. Sawitri

Peter A. Creed

Melanie J. Zimmer-Gembeck
Paper 3

As co-authors of the paper entitled “Longitudinal relations of parental influences and adolescent career aspirations and actions in a collectivist society”, we confirm that Dian Ratna Sawitri has made the following contributions:

a. Collecting and entering the data into the statistical software package.

b. Structuring the paper.

c. Conducting the data analyses with direction and feedback from co-authors.

d. Writing the paper with direction and feedback from co-authors.

Furthermore, we agree to the inclusion of the paper in this doctoral research submitted for examination.

Dian R. Sawitri  Date

Peter A. Creed  Date

Melanie J. Zimmer-Gembeck  Date
CHAPTER ONE

INTRODUCTION

The role of families, especially the role of parents, in their adolescent children’s career development is evident in all cultures (e.g., Fouad et al., 2008; Whiston & Keller, 2004). One facet of this influence is whether adolescent career aspirations, and the career actions conducted to attain these aspirations, correspond with their parents’ career-related expectations and input. Such congruence is important to understand, as on the one hand, parents clearly show intentional actions to influence their children’s career development (Young & Friesen, 1992), and on the other hand, the adolescents themselves view their parents as primary partners who should be involved in their important career developmental processes (Otto, 2000; Phillips, Christopher-Sisk, & Gravino, 2001; Tynkkynen, Nurmi, & Salmela-Aro, 2010). Being congruent with one’s parents regarding career matters is likely to be a positive correlate of adolescent career development, while lack of fit is potentially linked to interruptions in career progress (Leung, Hou, Gati, & Li, 2011; Wang & Heppner, 2002; Young et al., 2001).

Interest in examining career-related correspondence between adolescents and their parents has been growing recently (Garcia, Restubog, Toledano, Tolentino, & Rafferti, 2012; Hou & Leung, 2011). However, there is no existing scale to measure congruence with parents regarding career matters. Some items in existing measures of career indecision, career barriers, career decision-making self-efficacy, and career outcome expectations do capture adolescent-parent career-related congruence themes such as agreement or disagreement with others regarding one’s career choices (Fouad, Smith, & Enochs, 1997; Gati, Krausz, & Osipow, 1996; Holland, Daiger, & Power, 1980; McWhirter & Metheny, 2009; Osipow, Carney, Winer, Yanico, & Koschier, 1976). One existing tool, the Living-up-to Parental Expectations Inventory - Academic
Achievement Subscale (Wang & Heppner, 2002), encompasses limited aspects of career congruence (i.e., the extent to which the adolescents perceive that their career performance can meet their parents’ expectations), and was devised specifically for Chinese adolescents. Overall, the content of the items in various measures and that of the Living-up-to Parental Expectations Inventory - Academic Achievement Subscale (Wang & Heppner, 2002) are not sufficient to represent the features of adolescent-parent career congruence.

Other researchers have used a variety of ways to assess career congruence with parents regarding career matters; that is, by conducting interviews about the topic, assessing both adolescent career aspirations and their parents’ career expectations and comparing the results, as well as collecting both adolescent and parent ratings on parental intended career-related actions and examining the differential effect of the ratings (Garcia et al., 2012; Hou & Leung, 2011; Otto, 2000). Still, a scale to measure the construct of adolescent-parent career congruence had not been devised.

The first objective of this research program was to develop a new scale to measure career congruence with parents regarding career matters. The Adolescent-Parent Career Congruence Scale (devised in Study 1, and reported in Chapter 3) was the first tool designed to assess the perception of adolescents of their congruence with their parents regarding career matters. It was expected that this scale would contribute to the career development literature by providing a scale that measures a comprehensive concept of adolescent-parent career congruence. The newly developed scale was expected to boost research in the area of congruence between adolescents and their parents regarding career matters, which has been hindered because of a lack of a measure to assess it, and to extend current understanding of the nature of adolescent-parent career congruence, its antecedents and consequences, and its across-time correlates. Moreover, the Adolescent-Parent Career Congruence Scale can be used as a
diagnostic tool at an early stage of career counselling, as well as an evaluation instrument after a series of counselling sessions, at the end of a career intervention program, or after goal formulation and goal actualisation processes.

Together with parental career expectations, congruence with parents regarding career matters is a prominent factor in adolescent career development in collectivist societies (Fouad et al., 2008; Garcia et al., 2012; Leung et al., 2011; Shea, Ma, & Yeh, 2007; Wang & Heppner, 2002). In particular, previous studies have identified parental career expectations as one of the most influential environmental variables in adolescent career advancement in collectivist contexts (Fouad et al., 2008; Shea et al., 2007). Children from these cultural backgrounds usually perceive their parents' academic and career expectations to be more specific, in comparison to those held by parents in more individualist societies. For example, the education level they need to achieve, the career areas they should enter, and the career success level they should reach (Fouad et al., 2008; Oishi & Sullivan, 2005).

However, while career expectations from parents are often reported as significant contributors to positive academic and career outcomes (Fouad et al., 2008), differences between adolescent performance and preference and parental expectations in career and other life domains noticeably disrupt the career decision-making process and adolescent well-being (Leung et al., 2011; Wang & Heppner, 2002). Additionally, recent studies also have shown the positive effect of parental support on adolescent career aspirations, career planning (Ma & Yeh, 2010), and career exploration (Cheung & Arnold, 2010) in collectivist cultures. However, other research has demonstrated that whether adolescents perceive their parents’ actions as supportive determines the effect of parental intended support on their career development (Garcia et al., 2012). This suggests that the expected consequence of parental actions will be attained only if the
intended input is interpreted correspondingly by the parents and their adolescent children.

In a collectivist cultural context, where interdependent agency predominates, schemas are constructed in reference not only to desires and needs of the self, but also to expectations, evaluations, and thoughts attributed to relevant others in the relationship such as parents (Hardin, Leong, & Osipow, 2001). In this cultural context, input from parents should be the most powerful self-efficacy information for the adolescents (Oettingen, 1995; Oettingen & Zosuls, 2006), and taking parental career expectations and advice into account when developing career aspirations and conducting related actions is consistent with the individual’s self (Hardin et al., 2001). Specifically in a culture with a large distance in power, parents are socialised to be treated as superiors and children are expected to be obedient to them (Oettingen, 1995; Oettingen & Zosuls, 2006). Simultaneously, these children themselves are justifying parental dominance in their academic and career-related choices (Bernardo, 2010), and are showing more willingness to follow parental direction (Tang, 2002). Therefore, examining parental-related variables is likely to be useful in explaining career aspirations and career actions of adolescents in this cultural context.

Further, for an individual from a collectivist cultural background, a career is an indicator of a compromise between parental expectations and individual preferences (Leong & Chou, 1994). This idea confirms that the roles of parental career expectations and adolescent-parent career congruence in adolescent career development in collectivist cultures are indisputably important (Fouad et al., 2008; Garcia et al., 2012; Leung et al., 2011; Shea et al., 2007; Wang & Heppner, 2002). Therefore, it is important to understand the way these parental influences, which occur during the active process of career decision-making (i.e., they are proximal contextual variables), affect career aspirations and career actions.
In examining proximal contextual variables in relation to career behaviours, career researchers have used social cognitive career theory extensively as a theoretical framework (e.g., Lent et al., 2001; Lent, Brown, Schmidt et al., 2003; Lent et al., 2005). The process by which adolescents develop and manage career goals that are coherent with the self and their environmental opportunity structure, is consistent with the social cognitive career theory (Lent, Brown, & Hackett, 1994). One of the social cognitive career theory models, the social cognitive career choice model, has been used extensively to examine the pathways from proximal contextual variables to career goals and career actions in Western contexts in specific domains such as science, technology, engineering, and mathematics (e.g., Lent et al., 2001). However, there has been limited use of this model in collectivist societies to investigate how proximal contextual variables salient in this cultural context affect adolescent career behaviour in general.

The second objective of this research program was to examine the cross-sectional relationships between perceived parental expectations and perceived congruence with parents regarding career matters and career aspirations and the career actions of planning and exploration of adolescents in a collectivist cultural context, within the social cognitive career choice model. This objective is reported in Study 2 (Chapter 4). Integrating the two important parental contextual variables of parental career expectations and adolescent-parent career congruence into the social cognitive career choice model can contribute to the literature by explaining how personal and proximal environmental influences serve to strengthen, weaken, or override human agency in the career development of adolescents in a collectivist cultural context. The model can also explain the ways in which parental contextual variables influence career aspirations and career actions of adolescents in a collectivist setting. A cross-sectional design can lead to a better understanding of the same-time relationships among the constructs of interest.
Some proximal contextual variables have been assessed in longitudinal models in relation to both adolescent career goals and actions (Rogers & Creed, 2011) and career actions only (Lent, Sheu, Gloster, & Wilkins, 2010). However, there has been little longitudinal research examining proximal contextual variables relevant for adolescents in collectivist cultural contexts (i.e., parental career expectations and congruence with parents regarding career matters) and how they relate to career aspirations and career actions. To date, the bi-directional relationships among the social cognitive career variables in collectivist cultures also have not been explored.

The third objective of this research program was to identify the best fitting model to explain the longitudinal relationships among the constructs of interest. This objective is reported in Study 3 (Chapter 5). Longitudinal designs can provide a deeper understanding of the across-time relationships and the bi-directional nature of the social cognitive career theory variables. Overall, the results of this research program were expected to lead to research-based recommendations to foster young people’s career goal formulation and actualisation in collectivist cultures.

A sequence of studies with a large sample of Indonesian high school students was conducted to fulfil the three objectives of this research program, as Indonesia has been categorised as a collectivist country and is one of the highest scoring countries for the power distance dimension (Hofstede & Hofstede, 2005). Participants in the studies were Grade 10 and Grade 11 high school students, as these school years have been shown to be a period of active contemplation of educational options and career-related paths, and a phase where parental roles are influential (Paa & McWhirter, 2000; Rogers & Creed, 2011; Rogers, Creed, & Glendon, 2008).

In this thesis, the three studies are presented as three independent journal articles, following this introductory chapter and the literature review chapter. Study 1 is reported in the first journal article, which has been published in the *Journal of Career*
Assessment. This study constitutes Chapter 3. The first study was designed to develop a new instrument to measure adolescent-parent career congruence and to test the initial validity of the newly developed scale in relation to other constructs. This tool was then used in Study 2 (included as Chapter 4) and Study 3 (included as Chapter 5). Additionally, Study 1 was presented as a poster at the 22nd International Society for the Study of Behavioural Development (ISSBD) Biennial Meeting in Edmonton, Alberta, Canada from 8-12 July 2012.

The second study was captured in the second journal article (Chapter 4). It tested the cross-sectional social cognitive career choice model that includes the constructs of interest of parental career expectations, adolescent-parent career congruence, self-efficacy, outcome expectations, career aspirations, and the career actions of planning and exploration. The second journal article has been published online in the International Journal for Educational and Vocational Guidance. In addition, an abstract based on Study 2 has been accepted for a poster presentation at the 13th European Congress of Psychology to be held in Stockholm, Sweden from 9-12 July 2013.

Finally, the third journal article (Chapter 5) reported on the third study which examined the relationship among all variables of interest longitudinally. The third journal article has been re-submitted for review to the Journal of Research on Adolescence, and an abstract based on Study 3 has been accepted for a poster presentation at the Australian Guidance and Counselling Association National Conference to be held in Sydney, Australia from 26-28 June 2013.

In Chapter 3, 4, and 5, I modify the published version of the first article and the submitted version of the second and the third articles by arranging the numbering of tables and figures to match the associated chapter. I also integrate all references for the three studies in these chapters into the reference section at the end of this thesis to avoid any overlap.
In Chapter 6, I integrate a discussion of the results of the three studies, as well as implications for practice and research and recommendations for future research, and conclude how this research program addresses the gaps in the literature, improves upon earlier studies and contributes to the career development literature. Additionally, I include notification of the publication of the first article, confirmation of online publication of the second article, confirmation of re-submission of the third article, and confirmations of acceptance of the first, the second, and the third posters in the appendices.

In the next chapter, that is Chapter 2, I review the literature related to the development of a scale to measure congruence with parents regarding career matters, which is described in Study 1. I also summarise the literature related to the examination of the cross-sectional and longitudinal social cognitive career choice models, which are reported in Study 2 and Study 3 respectively. I further describe the gaps in the literature, and provide the aims of this research program. Finally, I present the research questions for each study and outline the hypotheses for Study 2 and Study 3.
CHAPTER TWO

REVIEW OF THE LITERATURE

The Interactionist Approach to Adolescent Development

As one developmental meta-theory reflecting an interactionist view, the ecological perspective of human development includes “the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded” (Bronfenbrenner, 1979, p. 21). This statement implies that the developing individuals are influenced by their environment, and they increasingly reorganise the environment in which they live. It also means that the interaction between the individual and the environment is reciprocal, showing a mutual accommodation process. Further, the statement indicates that the relevant environment for individual developmental processes is not restricted to a single setting, but can be expanded to integrate interrelations between immediate settings and the larger surroundings.

Bronfenbrenner (1979, 1994) argued that developing children are surrounded by interrelated systems. The inner circle is the microsystem, in which children have direct, face-to-face relationships with significant people, primarily parents and family. These are the immediate settings or environments in which children live and develop. Clusters of two or more microsystems are called mesosystems (e.g., parents talking to teachers constitute a linkage between two systems). Beyond this are settings that are not experienced directly by the child, but nonetheless influence the child’s microsystem. These systems, known as exosystems, are connected to the microsystem through links such as the parents’ co-workers or supervisors. Bronfenbrenner also described a
macrosystem, which incorporated the wider society and culture that influences the other systems. This includes such things as cultural beliefs regarding the role of parents in children’s development. Bronfenbrenner further proposed a chronosystem, which captures change or stability over time in the characteristics of the individual and the environment in which the individual is embedded. This includes both individual (e.g., career-related transition) and environmental change (e.g., historical events and social conditions).

From an ecological perspective, individual behaviour and development need to be considered as a joint function of the characteristics of the individual and the environment. The former involves both biological and psychological attributes, and the latter includes the physical, social, and cultural features of the immediate settings in which the individual lives, such as the family, school, and neighbourhood, as well as the wider contexts in which these setting are embedded, such as the culture and economic condition into which an individual is born (Moen, Elder, & Luscher, 1995).

In line with ecological theory, the family is a vital structure and the basis of the child’s immediate environment, where parents and children affect each other’s beliefs, attitudes, and behaviours. The perceived family input and feedback contributes substantially to the development of individual beliefs, behaviours, and other aspects of development. The enduring forms of reciprocal, increasingly complex interactions between individuals and their microsystem partners or significant others are called proximal processes. These processes drive the development of the child. In Bronfenbrenner’s (1979) concept of proximal processes, development is essentially a relational event, rather than an event happening within the individual (Bronfenbrenner, 1994). Bronfenbrenner (1979) used the analogy of a ping-pong game to describe proximal processes. In a ping-pong game, the movement of the ball back and forth becomes increasingly complex. Similarly, a more mature microsystem partner initiates
more complex “moves” that encourage the development of reciprocally more complex moves by the individual.

The ecological perspective also emphasises that, compared to the objective environment, individual perception of the environment is of primary significance, because it is the individuals’ perception that affects and guides their subsequent behaviour (Bronfenbrenner, 1979). Studies in the area of adolescent development which have compared objective assessments of family life with both adolescent reports of their parents’ behaviour and parents’ reports of their own behaviour, imply that the adolescents’ reports of their parents’ behaviour are more accurate than their parents’ reports (Steinberg, Darling, & Fletcher, 1995).

In the area of career development, a relational viewpoint focusing on the developing individual in a changing context is considered the best perspective from which to comprehensively understand career and vocational behaviours (Vondracek, Lerner, & Schulenberg, 1986). These career theorists argued that due to the continually changing nature of the individual and the context, a dynamic interactional approach, or a developmental contextual perspective, should be applied to understand career development. A developmental contextual point of view maintains that the context does not only make necessary adjustments, but also is influenced by the characteristics of the individual. When considered from a contextual perspective, vocational development reflects an interactive process where individuals both affect and are affected by the features of their environment, including social, cultural, and physical conditions.

**Family Influences and Adolescent Career Development**

Family process variables have been shown to have an effect on adolescent career development over and above that of family structural variables such as socio-economic level and the number of children in the family (Whiston & Keller, 2004). In the high school years, parental influences demonstrate the strongest effect on individual career
A host of family process variables, such as the quality of family relationships, positive parenting, parenting style, family relationship dimensions, and discrepancy between adolescents’ and parents’ views of the nature of their relationship, have been found to influence a variety of career outcomes, such as vocational identity, career exploratory activities, career decision-making self-efficacy, career indecision, and career planning (Hargrove, Inman, & Crane, 2005; Keller & Whiston, 2008; Lopez & Andrews, 1987; Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002; Noack, Kracke, Gniewosz, & Dietrich, 2010; Nota, Ferrari, Solberg, & Soresi, 2007; Penick & Jepsen, 1992).

More specifically, Whiston and Keller (2004) added that during adolescent career development, academic and career expectations from parents, as well as support provided by parents, also may influence adolescent career development to a greater degree than demographic or family structural variables. For example, adolescents whose parents expect them to go to college are more likely to do what their parents expect, even after controlling for adolescents’ ability level (Juang & Vondracek, 2001). Additionally, parental career-related support, which functions as an important external protective factor, was found to be facilitative of adolescents’ career preparation and to decrease the risk of school disengagement, regardless of ethnicity and gender (Perry, Liu, & Pabian, 2010).

However, it is important to note that parents do not act in a vacuum or in a unidirectional manner. In part, parents respond to their children’s behaviour, and children act in response to their parents’ actions (Bryant, Zvonkovic, & Reynolds,
2006). For example, when children perform well academically, parental academic aspirations for the children increase. In turn, the degree to which parents accommodate children’s capacities and facilitate their talents will influence children’s academic attainments and affect career-related outcomes (Feldman & Piirto, 2002).

Parents also engage intentionally in a variety of actions to assist their adolescent children’s career development (Young & Friesen, 1992). Career-specific parental behaviours, such as parental engagement, parental help in formulating career goals, and parental feedback on adolescents’ career goals, have been linked positively to various career outcomes (Dietrich & Kracke, 2009; Tynkkynen et al., 2010; Young et al., 2006). Providing instrumental support, structuring the home environment, and observing children were reported to be the most frequent, independent, parental actions, whereas setting expectations, providing information and advice, and giving encouragement and feedback were the most frequently mentioned joint activities intended to influence adolescent career development (Young, Friesen, & Pearson, 1988).

At the same time, adolescents themselves view their parents as dominant references and hold perceptions of how parents should be responsible and take part in their vocational development (Phillips et al., 2001; Bryant et al., 2006). Otto (2000) pointed out that adolescents place their parents in a special position and perceive them as partners or allies in the career development process. Parents are also the significant others who children are most likely to interact with while dealing with career-related issues. While extended family and significant others were found to be collaborative partners, parents are the most frequently mentioned significant others who adolescents seek out for specific advice and guidance during the career decision-making process (Phillips et al., 2001).

Additionally, adolescents believe that their parents should be involved when they formulate educational and occupational goals (Tynkkynen et al., 2010), and they
need to know that their parents are paying enough attention to them, are proud of their achievements, acknowledge their capabilities, and trust them to make decisions (Keller & Whiston, 2008). Adolescents highly value parental career-related actions that enable them to actualise career aspirations, to engage in a more systematic career exploration, and to have clearer career planning, such as advice about career pathways, encouragement to pursue career aspirations, and instrumental help in career planning (Blustein et al., 2002). In other words, adolescents value their parents’ input but have their own opinions on how their parents should contribute to their career decision-making process.

While parents often demonstrate intentional actions to influence their adolescent children’s career development, and adolescents welcome and value input from their parents, it is not uncommon that parents and adolescents often demonstrate different expectations and beliefs about one another (Daddis & Smetana, 2005; Zimmer-Gembeck, Ducat, & Collins, 2011). Specific guidance from parents could be interpreted as a pressure by some adolescents, while the absence of parental pressure might be identified as a lack of support by others (Altman, 1997). In addition, parents were often found to push their adolescent children to follow certain career paths, while the adolescents themselves specified that having people around to force them to select particular career areas could either be a positive or negative action. Some adolescents showed a tendency to back away, while others welcomed this kind of involvement (Phillips et al., 2001). Given that any environmental variable such as support, barriers, and resources might be subject to interpretation by the individual as enhancing or constricting agency in their career development (Lent, Brown, & Hackett, 2000; Vondracek et al., 1986), the intended effect of parental career-related actions will be attained only if the intended behaviours are perceived in the same way by both the
adolescent and the parent. In other words, a desirable outcome will be achieved when there is career congruence between them.

**Studies Examining Congruence with Parents regarding Career Matters**

In line with Bronfenbrenner’s (1979, 1986, 1994) ecological systems theory and Vondracek et al.’s (1986) person-context relationships proposition, individuals will show better behavioural functioning, demonstrate adapted outcomes, and be more satisfied when their characteristics fit the demands of the environment. Individuals are also likely to receive favourable feedback and input from the surroundings. Conversely, mismatched individuals will tend to demonstrate poorer outcomes.

In the career domain, being congruent with parents was found to be beneficial for adolescent career progress. Young et al. (2001) examined career-related conversation and actions among 20 adolescent-parent dyads (6 dyads were Chinese Canadian, 14 dyads European Canadian). The results showed that congruence between the adolescent’s career goals and the parent’s career goals for the adolescent affected the actualisation of adolescent career goals. Ma and Yeh (2005) investigated how intergenerational family conflict and relational-interdependent self-construal influenced career choice certainty among 129 Chinese American youths. The findings indicated that having a closer relationship with parents, accepting and being more in line with their parents' wishes, as well as selecting a career based on parental advice, led adolescents to be more certain about their career choices.

In contrast, a lack of congruence between adolescents and parents has been shown to predict negative outcomes. Wang and Heppner (2002) examined 99 Taiwanese university students who were primarily sophomores and found that the degree to which individuals lived up to parental expectations served as a better predictor of reduced psychological distress than perceived parental expectations alone. Leung et al. (2011) examined 1343 university students in China and found that Chinese students
who felt that they had performed adequately in the expected areas of personal maturity, academic achievement, and dating concern, were more likely to fulfil parental expectations and tended to be better able to deal with career choice issues, compared with those who felt that they had performed inadequately.

More recently, Garcia et al. (2012) conducted a longitudinal study with 141 Philippino undergraduate students enrolled in a nursing program. While Wang and Heppner (2002) and Leung et al. (2011) focused on the discrepancy between parents’ expectations and adolescents’ performance, Garcia et al. focused on the perception disparities between adolescents and their parents regarding parental intended support. Specifically, they were interested in examining the differential moderating role of student- and parent-rated support when predicting the relationship between students’ learning goal orientation and self-efficacy. The results demonstrated that high student ratings of parental support bolstered the relationship between learning goal orientation and self-efficacy, whereas low levels of parent-rated support strengthened the association between learning goal orientation and self-efficacy. These results suggest that adolescents and their parents may have different perceptions about supportive behaviour and that this variation may lead to differential effects on learning goal orientation and self-efficacy.

Findings from these studies suggest that the anticipated consequences of parental career-related actions will be met only if the intended inputs are similarly construed by the parents and their children. Thus, being congruent with parents regarding career matters captures the condition that children have career aspirations, interests, and show career progress that corresponds with parental preferences, are capable of making their parents happy, proud, or satisfied, and perceive that they are being supported by their parents at the level they require.
Previous Measures Capturing the Idea of Career Congruence with Significant Others

Career-related correspondence between adolescents and their significant others (e.g., parents) has been reflected in several items in existing measures of career indecision, career decision making difficulties, career barriers, career decision-making self-efficacy, and career outcome expectations. In these scales, congruence/incongruence with parents regarding career matters is manifested in items which contain the themes of agreement/disagreement and approval/disapproval by significant others regarding a career option, pressure from significant others to choose certain careers, and whether the individual has selected a career that corresponds with significant others’ expectations.

The Career Decision Scale (Osipow et al., 1976) was developed based on empirical findings to identify as many reasons as possible behind individuals’ career indecision. One of the items on the 16-item scale shows that selecting a career choice that does not correspond with significant others’ wishes can potentially disrupt individual career choice making. The particular item is: “I know what I’d like to be, but I’d be going against the wishes of someone who is important to me if I did so. Because of this, it’s difficult for me to make a career decision right now. I hope I can find a way to please them and myself”.

The Career Decision-Making Difficulties Scale (Gati et al., 1996) was developed based on a theoretical taxonomy of the difficulties that can be experienced in the career decision making process. This taxonomy consists first of difficulties that occur prior to the decision making process. These difficulties involve lack of readiness resulting from the lack of motivation, indecisiveness, and dysfunctional beliefs about career decision making. Second are difficulties that occur during the decision making process. These difficulties include lack of information about the self, the occupations, the ways of
obtaining information, and the career decision making process itself, as well as inconsistent information including problems resulting from unreliable information, internal conflicts, and external conflicts. Under the category of inconsistent information due to external conflict, disagreement with significant others as a source of career decision making difficulties is captured in the item: “I find it difficult to make a career decision because people who are important to me (such as parents or friends) do not agree with the career options I am considering”.

Specifically developed to identify individual difficulties in career decision making, the My Vocational Situation Scale (Holland et al., 1980) consists of three subscales, namely the vocational identity subscale, which assesses the extent to which individuals have clear goals, interests, and capacity, the occupational information subscale, which measures career knowledge, and the barriers subscale, which records difficulties that obstruct career choice making. Disapproval from significant others as one of the personal problems impeding the career decision making process is captured in an item in the barriers subscale. The item is: “An influential person in my life does not approve of my vocational choice”.

Devised to diagnose career indecision among Korean youth, the Korean Career Indecision Inventory (Tak & Lee, 2003) consists of five factors, lack of career information, lack of self-identity, indecisiveness, lack of necessity recognition, and external barriers. Disagreement with significant others as a reason for career indecision is captured in two items under the external barrier factor. The items are: “There are many people around me who oppose my future career” and “My parents oppose the occupation I really wanted to pursue”.

In the Career Barriers Inventory (Swanson & Tokar, 1991), disapproval by significant others is reflected in an item measuring external barriers: “My parents/family don’t approve of my choice of job/career”. The scale was devised to identify a factor,
event, or condition, either within an individual (internal) or in the individual’s environment (external), which interferes with their career choice process.

The Middle School Career Decision-Making Self-Efficacy Scale (Fouad et al., 1997) was developed to assess career decision-making self-efficacy among middle school students. The ability to deal with pressure from significant others to choose a career which does not correspond with their capabilities as an indication of career confidence is captured in the item: “How confident are you that you could resist attempts of parents or friends to push you into a career you believe is beyond your abilities or not for you?”

The Vocational Outcome Expectations Scale-Revised (McWhirter & Metheny, 2009) was developed to assess an individual’s expected consequences of selecting a career, by modifying the original Vocational Outcome Expectations Scale. Six items were added to the initial version of the scale to represent Bandura’s (1997) three types of outcome expectations: self-evaluation or satisfaction, physical, and social outcomes related to career choices. Congruence with parents regarding career issues as a favourable outcome is captured in one of the two items reflecting social-related outcome expectations. The particular item is: “My family will approve of my career/occupation choice”.

Various Attempts to Measure Adolescent-Parent Career Congruence

A variety of attempts also have been made by previous researchers to assess the correspondence between adolescents and their parents regarding career-related matters. In a study to assess the perceptions of adolescents regarding parental influence on their career development, Otto (2000) asked 362 high school juniors to describe how closely their thoughts were similar or dissimilar to their parents’ ideas about the type of occupation they would enter, how they should prepare for a career, and how they should value education. Findings indicated that the adolescents’ career-related values,
aspirations, and plans were generally compatible with what their parents had in mind for them.

Hou and Leung (2011) investigated gaps between career expectations from parents and children’s aspirations. They involved 1067 parent-child dyads. The researchers asked high school students and their parents to rate the desirability of 126 occupations, which were evenly spread over the six Holland interest types. Parental career expectations were then compared to their adolescent children’s aspirations according to the occupational field, prestige, and sex type of occupations, and disparity scores from these two ratings were calculated. The results showed a relatively small expectation-aspiration discrepancy for occupational field and a larger disparity for occupational prestige and sex type.

To obtain a more accurate picture of parental support, Garcia et al. (2012) collected both student ratings of support and parent ratings of support. These researchers then tested each rating in relation to learning goal orientation and self-efficacy. The results demonstrated the differential moderating roles between student and parent ratings. The relationship between learning goal orientation and self-efficacy was stronger when the student’s perceived level of parental support was high. In contrast, the association between learning goal orientation and self-efficacy was more robust when the level of parent-rated support was low. These results indicated that there might be a disparity between adolescents and their parents regarding career-related issues. In this case, adolescents and their parents hold different perceptions regarding parental intended support.

In sum, previous researchers have obtained information from adolescents regarding the similarity of their career-related ideas with those of their parents (Garcia et al., 2012; Hou & Leung, 2011; Otto, 2000). These researchers interviewed adolescents regarding their own career thoughts and the careers that their parents have
planned for them (Otto, 2000), and collected information from the adolescents about their career aspirations, as well as information from the parents regarding the career expectations they have for their children (Hou & Leung, 2011). In addition, information from both adolescents and parents regarding perception about the parents’ intended support was also obtained (Garcia et al., 2012). However, a related scale had not been devised, until Wang and Heppner (2002) developed the Living-up-to Parental Expectations Inventory.

The Living-up-to Parental Expectations Inventory (Wang & Heppner, 2002) was devised to measure perceptions of whether adolescents perceived themselves as being able to live up to parental expectations in personal maturity, academic achievement, and dating concern areas. Specifically developed for Chinese adolescents, this scale contains two sets of questions assessing their perceived parents’ expectations and their own perceived performance in certain areas. Career-related items are included in the Academic Achievement Subscale. A sample question is: “Parents expect me to study hard to get a high-paying job in the future”. Two rating scales are then chosen: “How strong do you currently perceive these expectations from your parents?” and “To what extent do you currently perform in this manner?” Responses to both sets of questions are indicated on a 6-point Likert-type scale that ranges from 1 (not at all expected/not doing well) to 6 (very strongly expected/doing very well). Individual discrepancy scores are then computed by subtracting the perceived parental expectations ratings from the perceived self-performance ratings. These scores are then summed, with higher scores indicating higher ability of the respondents to live up to parental expectations (Wang & Heppner, 2002). Internal reliability coefficients of .83 and .84 were reported in two samples of Taiwanese undergraduate students. This subscale was also reported to be negatively correlated with the State-Trait Anxiety Inventory - Chinese Version and the Beck Depression Inventory - Chinese Version (Wang & Heppner, 2002).
While a scale to assess one aspect of congruence with parents regarding career issues and other life domain (i.e., whether adolescents could live up to their parents’ expectations) has been developed (Wang & Heppner, 2002), there are other features of career congruence between adolescents and their parents that need to be captured. Previous researchers have demonstrated that certain kinds of parental support, such as demonstrating particular attention to adolescents’ career-related plans and showing general interest in and support for adolescents, were found to be more appropriate in enhancing adolescent career development than other types of support, such as explicit information regarding certain careers (Keller & Whiston, 2008). However, how well the support provided by parents satisfies the needs of their adolescent children has not been captured in a scale. Many researchers also have demonstrated the profound effect of parental career expectations on career decisions of adolescents (Fouad et al., 2008; Juang & Vondracek, 2001), and the effect resulting from adolescents also wanting to know that their parents are proud of them (Keller & Whiston, 2008). However, whether children’s career aspirations and actions correspond with expectations of parents and satisfy their parents has not been incorporated into a measure. Finally, parents are major sources of their children’s career-related knowledge and beliefs (Bryan et al., 2006; Otto, 2000). Children often derive career-related values from their parents and see their parents and close family members as career role models, which in turn affect their career choices (Fouad et al., 2008; Manheim & Seger, 1993). However, the question of whether adolescents and their parents have matching career-related values and ideas has not been integrated into a measure.

In the section that follows, I review the general concept of person-environment congruence and Kristof’s (1996) concept of person-environment fit in the organisational domain, and provide an overview of how these concepts can be applied in the career development domain to inform the construct of adolescent-parent career congruence.
Person-Environment Congruence

The concept of person-environment congruence is based on the interactionist theory of behaviour, which underlines that variance in behavioural and attitudinal variables is the result of the interaction between the individual and the environment (Muchinsky & Monahan, 1987). The contemporary theories of person-environment fit encompass three assumptions. First, individuals tend to find environments that match with their characteristics. Second, the degree of congruence between individuals and their environment is related to important outcomes for both the individual and the environment. Greater fit leads to positive outcomes, such as satisfaction, better performance, and higher persistence, whereas poorer fit relates to negative outcomes, such as dissatisfaction and lower achievement. Third, the process of fit is bi-directional. The individual influences the environment, and the environment influences the individual. This bi-directional relationship represents a system, where change in one component affects the other component in the system (Swanson & Fouad, 1999).

Relevant to the three assumptions proposed by Swanson and Fouad (1999), Muchinsky and Monahan (1987) identified two types of congruence between the individual and the environment. The first type of person-environment congruence is supplementary congruence, which captures the idea that individuals fit into the environment because they supplement or have characteristics similar to other members of the environment. If individuals are successfully matched to their most appropriate environment, they will be happier and more productive. The second type is complementary congruence, which will be attained when individuals complement the characteristics of the environment. Congruence will be achieved if there is a mutually balancing pattern of relevant characteristics between the individual and the environment.
Kristof (1996) has applied Muchinsky and Monahan’s (1978) concept of person-environment congruence to define the concept of person-organisation fit in the organisational domain, by expanding the definition of complementary fit. According to Kristof (1996), fit is “the compatibility between people and organisations that occurs when: (a) at least one entity provides what the other needs [complementary fit], or (b) they share similar fundamental characteristics [supplementary fit], or (c) both” (pp. 4-5).

First, complementary fit captures needs-supplies fit, referring to the situation that occurs when the needs of the individual are fulfilled by the support from others in the environment; and demands-abilities fit, referring to the condition that is achieved when the individual has the ability to satisfy the demands of the environment. Second, supplementary fit refers to the similarity of characteristics between the individual and the environment.

**Adolescent-Parent Career Congruence: Scale Development and Initial Validity**

**Assessment**

When formulating the Adolescent-Parent Career Congruence Scale, the concept of adolescent-parent career congruence was derived from Kristof’s (1996) concept of person-environment fit in the organisational domain that captures complementary and supplementary fit. The development of the construct of adolescent-parent career congruence was also based on the notion that parents are adolescents’ allies in their career development (Otto, 2000), as well as on the interactionist perspective; that is, Bronfenbrenner’s (1979, 1986, 1994) ecology of human development and Vondracek et al.’s (1986) developmental contextual approach, which both hold that behaviour is the result of a bi-directional relationship between the individuals and their environment.

When applied to the career development area, needs-supplies congruence refers to the situation that occurs when the needs of the adolescent are fulfilled by the support from parents, and demands-abilities congruence refers to the condition that is achieved
when the adolescent has the ability to meet parental career expectations and to make
their parents happy, proud, or satisfied. Supplementary congruence refers to the
similarity of characteristics between the adolescent and the parents regarding career
values, goals, and actions.

A scale to assess the extent to which the adolescent perceives congruence with
their parents in career matters was essential to fulfil the goals of the overall research
program. Knowledge of the correlates of adolescent-parent career congruence could
provide a deeper understanding of the antecedents and consequences of being congruent
with parents regarding career issues. A newly devised scale would also provide a
different type of scale measuring career-related congruence between adolescents and
their parents.

An existing measure, the Living-up to Parental Expectations Inventory, was
specifically devised for Chinese adolescents to assess one aspect of career congruence
between adolescents and their parents; that is, to what extent the adolescents are able to
live-up to their parents’ expectations. In contrast, the Adolescent-Parent Career
Congruence Scale, which was devised as the first step in this research program, was
based on the notion that parents are the adolescents’ partners in the career development
process as well as from an interactionist approach. To reflect this theoretical basis, this
scale was designed not only to measure one side of the adolescents’ perceptions,
whether they demonstrate career progress that corresponds with their parents’
preferences, meet their parents’ wishes, and make their parents happy, proud, or
satisfied, but also measures the other side of the adolescents’ beliefs regarding whether
their parents provide career-related support that satisfies their needs, and a neutral side
regarding whether the adolescents possess matching career values, plans, and ideas with
their parents.
In conclusion, the Adolescent-Parent Career Congruence Scale was designed to measure congruence with parents regarding career matters, including two important aspects: complementary and supplementary congruence. The scale focuses on whether the adolescents’ career aspirations and career actions correspond with their parents’ career preference, fulfil their parents’ wishes, and whether the parents’ support meets the adolescents’ needs (complementary congruence), as well as the extent to which adolescent has similar and matching ideas regarding career issues (supplementary congruence). The development and initial validation of this scale is reported in Study 1 (Chapter 3). This study has been accepted for publication in the Journal of Career Assessment.

The initial construct validity of the newly developed scale was assessed by testing the correlations between scores from the Adolescent-Parent Career Congruence Scale with scores from measures of parental support, living-up-to parental expectations on academic achievement, and life satisfaction. Parental support was expected to be related positively to the adolescent-parent congruence construct. Typically, support from parents is identified as encouragement, beliefs, and accessibility (Fisher & Stafford, 1999). Parents usually do their best to fulfil the needs of their children (Bryant et al., 2006; Whiston & Keller, 2004), and individuals are likely to feel supported by the environment (i.e., parents) if their characteristics are in line with the demands and features of the environment (i.e., parents) (Bronfenbrenner, 1979, 1986, 1994; Vondracek et al., 1986).

In addition, living up to parental expectations of academic achievement, which reflects the extent to which the adolescents perceive that their performance in academic and career domains could meet their parents’ expectations, was expected to be associated positively with perceptions of adolescent-parent career congruence. The discrepancy between perceived parental expectations and actual self-performance in
academic and career domains (Wang & Heppner, 2002) captures part of the concept of congruence between adolescents and parents regarding career matters (demand-abilities congruence). Finally, adolescent-parent career congruence was expected to be associated positively with life satisfaction. As an individuals’ cognitive appraisal of their life, life satisfaction is one aspect of positive, subjective well-being (Diener & Diener, 1995). Individuals will be more satisfied when there is a fit between themselves and their environment (Swanson & Fouad, 1999), and fitting in with parents should lead to more satisfaction with life for the adolescents from any cultural background (Oishi & Sullivan, 2005). The new scale developed in Study 1 was used in Study 2 and Study 3 in this research program to measure the construct of congruence with parents regarding career matters.

The next section focuses on a review of the literature relevant to the investigation of the cross-sectional and longitudinal social cognitive career choice models. In the following section, I present the social cognitive career theory, the social cognitive career choice model, followed by the constructs of interest in Study 2 and Study 3. I also describe the cross-sectional and longitudinal studies using the social cognitive career choice model examining the associations between proximal contextual variables and career goals and career actions, and summarise the literature reviewed. I further describe the characteristics of collectivist cultures and adolescent career development in these cultural settings, the important contextual influences for adolescents in these contexts, and summarise these descriptions. Finally, I provide the aims of this research program and present the research questions and hypotheses.

**Social Cognitive Career Theory**

In the career development literature, social cognitive career theory (Lent et al., 1994) has been widely used as a framework for studying academic and career behaviour. Representing a comprehensive theoretical model to understand the dynamic
relationships among a variety of personal, environmental, and behavioural variables, and the career choice making process, social cognitive career theory offers a schema to help explain how people are able to change, develop, and manage their own behaviour over time and in different situations.

In developing social cognitive career theory, Lent et al. (1994) adjusted, modified, and expanded the elements of Bandura’s (1986) social cognitive theory to the areas of academic and career development (Lent, Brown, & Hackett, 2002). Social cognitive theory explains human functioning in terms of a model of triadic reciprocality (Bandura, 1986). In this triadic reciprocal causation model (Bandura, 1986), three factors (i.e., cognitive and other personal factors such as affective states and physical attributes, external environmental influences, and overt behaviour) bi-directionally affect one another. The reciprocal interactions among personal variables, the environment, and behaviours do not work simultaneously, as a causal factor needs a time lag to exert its influence.

In the analysis of the personal determinants within the triadic reciprocity, the idea of personal agency is also central to the social cognitive theory. Personal agency is the capacity of individuals to intentionally choose, execute, and manage their own actions to actualise expected outcomes (Bandura, 1997). From this agentic socio-cognitive perspective, people are not only reactive to external influences, but they are also proactive and able to self-regulate (Bandura, 1999). In other words, individuals become both “products” and “producers” of their environments (Bandura, 2000; Wood & Bandura, 1989). In exercising agency, a self-efficacy mechanism holds a prominent role. According to Bandura (1982), the goals that an individual develops, the actions conducted to attain them, the persistence in the pursuit of goals, and the thoughts and feelings experienced when executing actions are presumed to be affected by self-
efficacy beliefs. In addition, external influences affect human functioning via self-efficacy, rather than directly (Bandura, 1999).

Lent et al. (1994) originally designed three social cognitive career theory models, namely the interests model, the choice model and the performance model, to understand the processes by which individuals develop interests, select choices, and produce performances, respectively, in educational and career domains. The satisfaction model was recently introduced as the fourth model to explain satisfaction and other features of educational and career-related adjustment (Lent & Brown, 2006). To this point, social cognitive career choice models have received the majority of attention from career researchers (Lent, Paixão, Silva, & Leitão, 2010). In the section that follows, I describe the social cognitive career choice model and the constructs of interest in the current research program.

**Social Cognitive Career Theory Choice Model**

This research program used the social cognitive career choice model (Lent et al., 1994) to examine the relationships among the constructs of interest. In this model, person factors (e.g., personality, intelligence) and background contextual variables (environmental variables that occur before an active period of career decision making; e.g., socio-economic status) shape learning experiences. In turn, individual interpretations of these experiences shape the development of self-efficacy (beliefs about one’s ability to successfully organise and perform courses of action) and outcome expectations (beliefs about the consequences of given actions). Further, self-efficacy fosters favourable outcome expectations, and both self-efficacy and outcome expectations, independently and jointly, lead to career interests (activity liking) and career goals (intentions to engage in a particular activity).

Under beneficial proximal contextual influences (environmental variables that occur during an active period of career choice making), interests are translated into
goals, and goals, in turn, motivate career choice actions to achieve goals. Subsequently, particular success or failures that follow the choice actions promote learning experiences, which prompt individuals to revise their self-efficacy and outcome expectations, and in turn leads to a change in interests and goals. Providing experiences, various performance tasks, as well as direct and vicarious exposure to a wide range of career possibilities, should lead to differentiated beliefs about the individual’s own capabilities and consequences of performing a particular behaviour, which in turn, will cultivate career-related interests and goals that tend to become more definite and crystallised over time. The social cognitive career choice model with constructs of interest highlighted in bold is depicted in Figure 2.1.


The social cognitive career choice model was chosen as a theoretical framework to explain the relationships among the constructs of interest in Study 2 and Study 3 for several reasons. First, the model subdivides the concepts of goals and actions (i.e., actions required to implement goals). This partition is useful to underline the
intermediary function of personal agency in the career decision making process, to highlight the dynamic nature of goals, and to clarify the career choice making stages in which interventions might be optimally conducted (Lent et al., 1994; Lent et al., 2000; Lent et al., 2002). Second, the model has the capacity to explain the ways by which proximal contextual influences relate to career goals and career actions (Lent et al., 2000). Finally, this model can be used as a framework of reference to test the reciprocal relationships among the social cognitive career theory variables. In this model, for example, goals are seen as dynamic actions, as they are often revised by subsequent performance outcomes, or by any indicators of performance accomplishment such as career choice actions. For instance, after choosing a certain major, a student may find it difficult to succeed in several required courses. How well the student performs in these courses, or the results of exploration in related career areas may lead to a modification of perceived efficacy and outcome expectations, and prompt a change in goals, such as selecting a new major (Lent & Hackett, 1994).

**Constructs of Interest in the Social Cognitive Career Choice Model Testing**

**Self-efficacy.** Self-efficacy refers to beliefs about one’s ability to successfully manage and perform courses of action in particular domains. Self-efficacy beliefs are shaped by four main sources of information, namely, personal attainments, vicarious learning, social persuasion, and physiological and affective states (Bandura, 1986). Among these types of learning experiences, personal accomplishments in a given performance are assumed to be the most influential source of self-efficacy beliefs. Accordingly, successful experiences lead to elevated self-efficacy, whereas failures in performing domain-related tasks decrease it. In turn, individuals high in self-efficacy tend to imagine positive outcomes regarding related tasks they perform (Lent et al., 1994; Lent et al., 2002).
**Outcome expectations.** Outcome expectations are beliefs about the outcomes of a course of action (Bandura, 1986). According to Bandura (1986), individuals act on the basis of their judgment about what they are able to do (i.e., self-efficacy), as well as on the beliefs about the expected consequences of their actions. Having high outcome expectations (i.e., a sense that individuals will be successful when their goals are attained) provides motivation during the goal striving process and influences how individuals progress in the career decision making process. Through learning experiences, outcome expectations may take various forms of behaviour, namely, social effects such as recognition and acknowledgment from others, physical effects such as financial benefit, and self-evaluation that is progressively shaped via individuals’ learning experiences (Bandura 1986, 1997).

**Choice goals.** Defined as an individual’s intention to engage in a certain activity or to affect a particular outcome (Bandura, 1986), career goals in Study 2 and Study 3 were operationalised as career aspirations, specifically, an individual’s expressed career-related goals towards leadership positions, ambition to train and to manage others, and interest in further education (O’Brien, 1996). Career aspirations are important to study during adolescence for several reasons. First, career aspirations guide the actual career choice actions (Lent et al., 1994). Several theories such as Locke and Latham’s (1990) goal setting theory and Ajzen’s (1988) theory of reasoned action have demonstrated the hypothesised link between goals and actions. Previous social cognitive career theory-based studies have also demonstrated the role that career goals play in predicting choice actions (Lapan, Shaughnessy, & Boggs, 1996; Lent, Brown, Schmidt et al., 2003).

Second, career-related goals formulated in adolescence also function as forerunners to adult career choices and success (Schoon & Polek, 2011). The link between adolescent career aspirations and future career attainment has been found in
previous studies (e.g., Ashby & Schoon, 2010; Schoon & Parsons, 2002; Schoon & Polek, 2011). Through a complex set of processes and interactions, career aspirations enhance the opportunities an individual has to acquire an advanced education, which in turn, allows for greater career possibilities in adulthood (Rojewski, 2005).

Finally, goal setting (i.e., formulation of aspirations) in adolescence is a crucial development task in career preparation and vocational identity development (Erikson, 1968). Previous studies indicate that adolescents become increasingly realistic and adapted to their career aspirations over time (e.g., Armstrong & Crombie, 2000; Rojewski & Yang, 1997), as aspirations are dynamic structures that need to be redefined over time to fit realities (Brandstädter & Rothermund, 2002).

**Choice actions.** In the social cognitive career choice model, the conceptions of goals and actions were partitioned (Lent et al., 2002). Social cognitive career theory views career actions as behavioural efforts to implement career goals. In this research program, career actions were operationalised as career planning and career exploration. As essential actions intended to realise an individual’s career aspirations (Rogers et al., 2008), career planning and career exploration are both ongoing processes (Blustein 1997; Zikic & Klehe, 2006), and represent the attitudinal element to career development (Sharf, 2010). Career planning involves a continuing activity to outline future orientation and knowledge of what actions are required in order to pursue career goals (Phillips & Blustein, 1994; Zikic & Klehe, 2006). Since contemporary careers are characterised by lifelong planning, it makes sense that career planning is associated with more successful careers (Hall, 2002).

Whilst career planning relates to thinking about and preparing for a career-related future, career exploration activities refer to the use of relevant resources (Sharf, 2010). Triggered particularly during career-related transitions, career exploration allows individuals to better manage challenges associated with a transition (Blustein, 1997;
Savickas, 1997). Career exploration includes activities of gathering information relevant to the progress of the individual’s career (Blustein, 1997; Stumpf, Colarelli, & Hartman, 1983) and captures self- and environmental explorations (Zikic & Klehe, 2006). Self-exploration involves the exploration of individuals’ own interests, values, and experiences in order to reflect on their career choice and to obtain a better understanding of themselves, whereas environmental exploration focuses on individuals’ examination of various career choices and involves collecting information on jobs, organisations, occupations or industries that leads to more well-informed career decisions (Zikic & Klehe, 2006). During the process of career exploration, an increased self-understanding and knowledge about the world of work enables individuals to crystallise their career goals and preferences, which can lead to a focus on a specific area for exploration (Zikic & Hall, 2009). Moreover, individuals who thoughtfully search for, analyse, and assess career information relevant to themselves are likely to demonstrate better adaptation within rapidly changing modern work settings (Flum & Blustein, 2000).

**Proximal contextual influences.** Based on the works of Vondracek et al. (1986) and Astin (1984), Lent et al. (2000) introduced the concept of contextual influences. Astin’s (1984) idea of the perceived “structure of opportunity” is similar to Vondracek et al.’s (1986) “contextual affordances”, which refers to the resources individuals perceive as being offered by their environment. These two concepts focus on subjective individual perceptions of the environment. This is coherent with the way social cognitive career theory views cognitive appraisal as a vital process in directing human behaviour. This view underlines the individual’s active role in construing and interpreting what the environment provides without reducing the significant effect of objective elements of the environment (Lent et al., 2002).

Contextual influences include both distal and proximal influences. Distal influences are environmental influences that occur before the periods of active career-
related decision making. During the formative stages of career development, distal influences such as the opportunities to develop certain skills and the availability of career-related role models, affect the development of an individual’s efficacy beliefs regarding personal capabilities in dealing with a range of career-related activities, outcomes the individual expects to obtain after conducting these activities, and interests in these activities, through learning experiences. Proximal variables are those that occur during an active period of occupational choice making, such as the availability of jobs in the individual’s preferred fields and the financial support to enter certain career-related paths, and affect the process of career decision making via two important ways. First, proximal variables may moderate the relationships between interests and goals and the links between goals and actions. This means that opportunity structures influence an individual’s ability or willingness to translate career interests into goals and to transform goals into actions. Second, proximal variables can have direct influences on career choice formulation and actualisation. Proximal contextual variables that come into play at critical career choice junctures can exert direct effects on career goals and career actions, such as in the situation when individuals have to defer their career preference to follow parental wishes (Lent et al., 1994; Lent et al., 2000; Lent et al., 2002).

In viewing the conceptions of contextual influences, Bandura (1999, 2000) has different arguments from Lent et al. (1994). First, rather than seeing the effects of contextual influences on self-efficacy as only being relatively distal in nature, Bandura posited that influences from the environment affect self-efficacy distally as well as proximally. Second, rather than agreeing that proximal contextual influences directly affect actions, Bandura suggested that the effects of contextual variables, either distal or proximal, on actions, are mostly indirect via their influence on self-efficacy, goals, and other person variables. This means that the effects of contextual variables on goals can
be direct and indirect via self-efficacy, whereas that of contextual influences on actions can only be indirect via goals and self-efficacy. Study 2 and Study 3 in this research program incorporated the views of Bandura and Lent et al. in developing hypotheses regarding the relationships between proximal contextual variables and goals and actions, and did not include the moderator role of proximal contextual variables in translating goals into actions, as depicted in Figure 2.2.

![Diagram](image)

**Figure 2.2.** The effect of proximal contextual variables on goals and actions according to Bandura (1999, 2000) and Lent et al. (1994). (a) The direct path from proximal contextual variables to self-efficacy (Bandura, 1999, 2000); (b) Paths which are common to both views, (c) The direct path from proximal contextual variables to actions (Lent et al., 1994). From “The Role of Contextual Supports and Barriers in the Choice of Math/Science Educational Options: A Test of Social Cognitive Hypotheses,” by R.W. Lent, S. D. Brown, B. Brenner, S. B. Chopra, T. Davis, R. Talleyrand, and V. Suthakaran, *Journal of Counseling Psychology, 48*, p. 475. Copyright by American Psychological Association.

In the following section, I discuss in greater detail the existing cross-sectional studies which use only Lent et al.’s (1994) view, apply only Bandura’s (1999, 2000) proposal, compare the two approaches, and integrate both views in hypothesising the relationships between proximal contextual variables and career goals and career actions.
within the social cognitive career choice model. Finally, I review the limitations of the existing studies and outline future directions for research.

**Cross-Sectional Studies Examining Proximal Contextual Variables in Relation to Goals and Actions within the Social Cognitive Career Choice Model**

Lent et al. (2001) investigated whether proximal contextual variables of supports and barriers moderated the relationship between interests and choice goals. Collecting data from 111 college students in introductory psychology courses, the authors also examined whether proximal contextual variables were related to choice goals directly, as suggested by social cognitive career theory (Lent et al., 1994), or were related to choice goals both directly and indirectly, via self-efficacy, as proposed by Bandura (1999, 2000). In this study, contextual supports consisted of four clusters, namely, social support and encouragement, instrumental assistance, access to role models or mentors, and financial resources, whereas barriers contained four aspects, that is, social or family influences, financial constraints, instructional barriers, as well as gender and race discrimination.

The results provided partial support for the moderator hypothesis by demonstrating that the link between interests and choice goals was found both in participants with high and low levels of support and barriers: when barriers were perceived to be low, the relationship was found to be stronger. The results of the study also revealed that compared to a model including direct effects on choice goals, the one capturing the indirect effects of supports and barriers via self-efficacy demonstrated a better fit to the data. The latter findings suggest that proximal contextual influences predict choice goals by strengthening or weakening self-efficacy, rather than only by directly promoting or deterring choice goals. It was recommended that future research examine the role of contextual influences on academic and career decision making in students representing diverse cultures and different levels of acculturation, in students.
experiencing different career choice making stages, and among students who are currently considering career-related options.

Lent, Brown, Nota et al. (2003) examined all plausible pathways through which proximal contextual variables might relate to students’ career choice considerations using 796 Italian high school students, by comparing Lent et al.’s (1994) and Bandura’s (1999, 2000) views. Participants in this study completed measures of self-efficacy, outcome expectations, interests, supports and barriers from significant others, as well as choice considerations (i.e., career choice goals) related to occupations reflecting Holland’s (1997) RIASEC occupational types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional). The authors found a significant relationship between support and self-efficacy across all Holland’s themes and a significant association between barriers and self-efficacy in two themes (Artistic and Conventional). Although the partially mediated model demonstrated a better fit to the data than the direct effects model in all but one case (the support/choice consideration path in the Realistic theme), the environmental influences did not show a direct relationships with choice consideration, indicating that the associations between supports and barriers and choice consideration in most of the Holland themes were fully (rather than only partially) mediated by self-efficacy.

While Lent, Brown, Nota et al.’s (2003) study provided more support for the indirect model, several limitations were identified. First, different from the previous study, this study involved high school students as participants; however, many of the participants were not in the active stages of educational or career-related choice making. Therefore, the availability of contextual supports and barriers demonstrated less direct significance on choice consideration. Future research was recommended to examine the influence of proximal choice-related contextual variables during the active phases of career decision making. Second, the study only investigated the direct and indirect
associations between supports and barriers and choice consideration, without exploring
the relationships between the proximal contextual variables and choice actions. It was
suggested for future research to assess a variety of routes by which proximal contextual
variables relate to choice consideration and corresponding actions to implement them.
Finally, the study by Lent, Brown, Nota et al. (2003) only assessed one particular
component of supports and barriers (i.e., social influences), and therefore, future studies
are needed to investigate additional or other forms of supports and barriers.

Lent, Brown, Schmidt et al. (2003) examined the associations between proximal
contextual variables of social supports and barriers from parents, friends, and other
important people, and both career choice goals and actions (i.e., persistence) relative to
the pursuit of an engineering degree. Using 328 students in an introductory engineering
course, the authors compared two alternative approaches depicting the routes through
which proximal contextual variables should relate to choice goals and persistence. The
two conceptual schemes are social cognitive career theory’s direct model (Lent et al.,
1994), which suggests that proximal contextual variables of supports and barriers
directly relate to choice goals and actions, and Bandura’s (1999, 2000) mediated paths
model, positing that these environmental influences affect choice actions indirectly via
goals and self-efficacy.

The findings demonstrated better support for Bandura’s (1999, 2000) model,
showing that supports and barriers were related to persistence indirectly through choice
goals and self-efficacy. While the study by Lent, Brown, Schmidt et al. (2003) was able
to incorporate career goals and career actions in relation to proximal contextual
influences of supports and barriers, several limitations and directions for future research
were indicated. First, it was recommended that further research examine the effects of
supports and barriers on career choice behaviour within diverse cultural contexts, such
as involving influences from family members or significant elders in predicting career
choices of students in collectivist cultures. Second, it was suggested to assess the features of the contextual supports and barriers and how specific kinds of supports and barriers (e.g., gender barriers) affect choice behaviour. Finally, the use of a longitudinal design is needed to examine the longitudinal benefit of intervention procedures in relation to effective career decision making.

Lent et al. (2005) investigated the applicability of the social cognitive career theory among students at historically Black and predominantly White universities by integrating both Bandura’s (1999, 2000) suggestion that there are both direct and indirect routes through which proximal contextual variables exert influences on goals and Lent’s (1994) argument regarding the direct paths from proximal contextual variables to goals. Participants of the study were 487 college students, who completed measures of academic interests, goals, self-efficacy, outcome expectations, as well as social support and barriers from parents and important others in relation to engineering majors. The results of the study indicated that the social cognitive career choice model demonstrated a satisfactory fit to the data across gender and university type. In the model with the full sample, as well as in the other two models where the data were analysed by gender and university type, respectively, the authors found consistent support for the indirect effect hypothesis, showing that both perceived supports and barriers were related to goals indirectly through self-efficacy. There was also support for the direct effect hypothesis, demonstrating a significant direct path from barriers to goals; however, the effect was small.

Additionally, the model with all participants also partially supported Lent et al.’s (1994) direct hypothesis, in that barriers, but not supports, demonstrated a significant small direct relationship with goals. Overall, the study provides a theoretical understanding for women and students of colour when pursuing non-traditional academic choices. However, it was identified that there is a need for future research
involving a longitudinal design to assess the across-time relationships among the social
cognitive career variables that are considered to relate to future goals. It was also
suggested that further research include choice actions in the model, such as goal
persistence in science, technology, engineering, and mathematics.

Rogers et al. (2008) explored the applicability of the social cognitive career
choice model outside the subject domain to explain career actions of planning and
exploration in high school students. They included personality variables, namely,
neuroticism, extraversion, openness, conscientiousness, and agreeableness as person
factors, and involved support from parents, teachers, friends, and the social environment
as contextual factors, together with self-efficacy, outcome expectations, goals, and
career planning and career exploration in their cross-sectional social cognitive career
choice model. Involving 414 Australian high school students in Years 10, 11 and 12, the
authors used hierarchical multiple regression analyses to determine the relative
contributions of the predictor variables on the outcome variables, to test the moderating
effects of support on the relationship between career goals and career actions, and to test
the mediation effect.

In Rogers et al.’s (2008) study, the link between goals and career choice actions
was found to be robust, and the links among self-efficacy, goals, and these choice
actions were found to be moderate, whereas outcome expectations were not shown to be
a significant correlate of any of the variables in the model. Significantly, personality and
support were related to the career choice process both directly and indirectly. Openness
and conscientiousness were found to have direct relationships with career planning and
indirect relationships with career planning via self-efficacy and goals, whereas support
moderated the relationship between goals and career planning, and was found to be
associated directly with career exploration. Rogers et al. (2008) filled a number of
research gaps by integrating personality and support to explain more general career
goals and career actions in the social cognitive career choice model (Lent et al., 1994) and by involving high school students in their study.

Lent, Paixão et al. (2010) examined a social cognitive career choice model (Lent et al., 1994) in a sample of 600 Portuguese high school students. Incorporating Bandura’s (1999, 2000) and Lent’s (1994) views, the authors administered measures of occupational self-efficacy, outcome expectations, interests, social supports and barriers, and choice consideration (career choice goals) across the six Holland (1997) RIASEC types. Findings indicated that across all Holland occupational themes, the model demonstrated a good fit to the data and generally favoured the hypotheses that self-efficacy and outcome expectations jointly predict interests, and that interests mediate the link between self-efficacy and outcome expectations and choice consideration.

Regarding the role of the proximal contextual influences of supports and barriers from important people in the students’ lives, the relationship between supports in all Holland themes and choice consideration was found to be indirect via self-efficacy, whereas the association between barriers and self-efficacy was significant only in three themes (i.e., Realistic, Artistic, and Conventional).

These results established that proximal contextual influences were likely to relate to choice consideration indirectly via self-efficacy, rather than directly. As the cross-cultural validity of the social cognitive career theory has become an area of increasing research inquiry in recent years, the study by Lent, Paixão et al. (2010) was able to replicate and to expand Lent, Brown, Nota et al.’s (2003) study which involved Italian high school students, by testing the predictive utility of the social cognitive career choice model in Portuguese high school students. Future studies need to involve participants from non-Western countries, collectivist cultural backgrounds, and developing countries. Given that this study used the concepts of supports and barriers from important people around the participants, more research is required to use supports
and barriers that are more proximal, actual, and salient to the decision makers. As most studies of the social cognitive career choice model so far have applied a cross-sectional design, more use of longitudinal design is required to explore the across-time and causal influences among the variables.

Byars-Winston, Estrada, Howard, Davis, and Zalapa (2010) examined the academic interests and goals of 223 African American, Southeast Asian, Latino/a, and Native American undergraduate students majoring in biological science and engineering. The authors were interested in investigating the relationships among math/science academic self-efficacy, math/science outcome expectations, math/science interests and goals to pursue a biology or engineering degree. In the model, they also involved ethnic variables such as ethnic identity and other-group orientation to represent distal contextual variables, and perceptions of campus climate to connote proximal contextual supports. Regarding the contextual factors, the authors assessed Bandura’s (1999, 2000) proposition that the association between perceptions of campus climate and goals would be mediated by self-efficacy. Path analyses revealed that the model provided a good fit to the data across both biological science and engineering groups, and positive perceptions of the campus climate were demonstrated to indirectly relate to goals via self-efficacy. Different from previous studies (Lent, Brown, Schmidt et al., 2003, Lent et al., 2005), which revealed non-significant relationships between outcome expectations and interests and goals, in their study, Byars-Winston et al. found that outcome expectations were related significantly to interests and goals.

Lent, Lopez, Sheu, and Lopez (2011) examined the predictive utility of the social cognitive career choice model using a sample of 1404 students majoring and intending to major in various computing-related disciplines at 23 historically Black and 27 predominantly White universities. This study was designed to investigate the applicability of the social cognitive career choice model in a large, racially, and
geographically diverse sample of computing majors. Findings indicated that the social
cognitive career choice model demonstrated satisfactory fit to the data across gender,
educational level (beginning and advanced undergraduates), institutional setting,
racial/ethnic groups (European and African Americans), and two successive academic
year cohorts. The pattern of findings in a model with the full sample demonstrated that
social supports and barriers were related to intentions to persist in the computing
discipline (career choice goals) both directly and indirectly, via self-efficacy. However,
as found in previous studies (Lent, Brown, Schmidt et al., 2003; Lent et al., 2005),
direct paths from outcome expectations on interests or goals were not significant. This
study by Lent et al. (2011) extended earlier research on the social cognitive career
choice model in the context of science, technology, engineering, and mathematics by
investigating the theory's capacity for explaining the interests and choices of students in
the computing disciplines, and by including two groups of underrepresented students in
computing (i.e., women and African Americans).

From the above description, the continuing significance of investigating cross-
sectional social cognitive career choice model is obvious. However, there is an urgent
need for longitudinal studies that can examine the across-time relationships among the
social cognitive career variables. While in cross-sectional designs the presumed causes
and effects are assessed at the same point in time, in a longitudinal design, the variables
are assessed from one time to another. Longitudinal designs allow researchers to
examine the plausibility of causal interpretations by assessing whether after a particular
interval the presumed causes precede their effects on the consequences (MacKinnon,
Lockwood, Hoffman, West, & Sheets, 2002; Menard, 2002). In particular, the cyclical
nature of the variables in the social cognitive career theory warrants testing (Nauta,
Kahn, Angell, & Cantarelli, 2002), and a longitudinal design also allows researchers to
examine it. In the section that follows, I provide a review of the literature regarding
longitudinal studies in Western contexts which involve the social cognitive career theory variables.

**Longitudinal Studies Examining Proximal Contextual Variables in Relation to Goals and/or Actions within the Social Cognitive Career Choice Model**

Rogers and Creed (2011) used both cross-sectional and longitudinal data to investigate the correlates of career planning and career exploration from the perspective of social cognitive career theory. Participants of the study were 631 Australian Grade 10-12 students from two high schools, who completed measures of personality only at T1, and those of self-efficacy, outcome expectations, goals, and supports (contextual variables), as well as career planning and career exploration (career actions) twice, at both T1 and T2, six months apart. Using hierarchical regression analyses, the authors examined whether personality, self-efficacy, outcome expectations, goals, and supports from parents, teachers, friends, and the social environment explained career planning and career exploration in the cross-sectional model. They were also interested in investigating whether changes in the predictor variables from T1 to T2 explained changes in the outcome variables from T1 to T2 in the longitudinal model.

The results demonstrated robust support for self-efficacy and goals in predicting career planning and career exploration across all grades at T1, as well as in predicting changes in these action variables from T1 to T2. The authors found significant correlations between all the personality measures, except agreeableness, and career planning and exploration at T1. However, these relationships disappeared when they were tested in the context of the other study variables, suggesting a more significant role for the social cognitive career variables than for personality. The direct relationship between outcome expectations and career actions were also not significant in the models. Extending previous studies that reported mixed results for the cross-sectional relationships between supports and career actions (Lent et al., 2002; Lent, Brown, Nota,
et al., 2003; Lent, Brown, Schmidt, et al., 2003; Rogers et al., 2008), the findings of Rogers and Creed’s (2011) study revealed a strong relationship between supports and career exploration among Grade 10 students in both cross-sectional and longitudinal models. Additionally, Rogers and Creed (2011) filled a number of research gaps by incorporating goals and actions in the model and using career planning and exploration to refer to general career actions. They also used both cross-sectional and longitudinal data obtained from high school students from three year levels. While the application of the social cognitive career choice model to predict career outcomes outside the subject matter field has been tested to predict career planning and career exploration in this case, the bi-directional relationships among the variables to test more comprehensive social cognitive career theory hypotheses were unexplored.

Early efforts to test the bi-directional relationships among the social cognitive career variables were conducted by Nauta et al. (2002). Nauta et al. (2002) recognised that cross-sectional designs do not allow career researchers to conclude whether self-efficacy actually serves as an antecedent to interests, and acknowledged questions about the possibility of a causal path from interests to self-efficacy. The authors responded to these research gaps by investigating whether self-efficacy or interests were predominant longitudinally in predicting each other using a cross-lagged panel design, by examining 104 college students in three waves of data collection over the course of an academic year. The authors controlled the autoregressive paths reflecting the relationships between self-efficacy and interests at T1 with the same variables at T2, and tested the paths from T1 self-efficacy to T2 interests and from T1 interests to T2 self-efficacy. Using structural equation modelling, the results revealed that the relationships between self-efficacy and interests were bi-directional over time.

More recently, Lent et al. (2008) expanded Nauta et al.’s (2002) study by investigating the across-time relationships among four of the variables of the social
cognitive career choice model, namely, self-efficacy, outcome expectations, interests, and goal persistence (career actions). Using a cross-lagged panel design, the authors tested four models: first, a baseline model, which contained covariances among all T1 variables, covariances among the errors of the T2 variables, and autoregressive paths, showing the relation of each T1 variable to the same variable at T2; second, a model which considered self-efficacy as an antecedent of outcome expectations, interests, and goal persistence; third, a model where self-efficacy served as a consequence of the latter variables; and finally, a model which contained bi-directional relationships among the study variables. Findings revealed that the model with self-efficacy as an antecedent demonstrated the best fit to the data compared to the other models. While this study presented a systematic examination of longitudinal predominance, due to its design, proximal contextual influences were not included in the model.

The social cognitive career theory has proposed the plausibility of bi-directional relationships among the variables. The relationship between self-efficacy and outcome expectations and the associations between goal progress (career action) and self-efficacy and outcome expectations are reciprocal (Lent, 2005; Lent & Hackett, 1994; Lent et al., 2008). It has also been proposed that the relationship between self-efficacy and proximal contextual variables is likely to be reciprocal. Individuals having a higher level of confidence in conducting career tasks may have a larger capacity to compile available environmental resources, and be more likely to view those contextual affordances in an optimistic way (Lent et al., 2000).

In order to investigate a fuller social cognitive career choice model, Lent, Sheu et al. (2010) included proximal contextual influences of support and barriers from parents, friends, and other important people in the longitudinal model, in addition to self-efficacy, outcome expectations, interests, and goal persistence (career actions). The authors administered all measures to 116 students in the beginning engineering courses
at two historically Black universities at two data collection points, five months apart. They also integrated Lent et al.’s (1994) and Bandura’s (1999, 2000) views in developing their hypotheses regarding how proximal contextual variables relate to goal persistence. In their studies, three models were tested. The first one was a base model which involved covariances among all variables at T1, covariances among errors of the variables at T2, and autoregressive paths representing the relationship of each variable at T1 to the same variable at T2. The second model was a unidirectional model containing all paths in the base model in addition to the hypothesised paths from T1 self-efficacy to T2 outcome expectations; T1 self-efficacy and outcome expectations to T2 interests; T1 supports and barriers to T2 self-efficacy; and T1 self-efficacy, outcome expectations, interests, supports, and barriers to goal persistence at T2. Finally, the third model was a bi-directional model including all paths in the base and the unidirectional models plus several reverse paths from T1 self-efficacy to T2 supports and barriers and from T1 outcome expectations, interests, and goal persistence to T2 self-efficacy.

Path analyses favoured a bi-directional model, showing that self-efficacy served as a longitudinal precursor of outcome expectations, interests, goal persistence, and supports. Interests and self-efficacy were also found to be related reciprocally, whereas paths from T1 self-efficacy to T2 interests and outcome expectations, and also from T1 outcome expectations and interests to T2 self-efficacy, were found to be significant. T1 supports were found to be across-time predictors of T2 goal persistence, but T1 supports and barriers did not account for unique variance in T2 self-efficacy. Expanding the work of Lent et al. (2008), Lent, Sheu et al. (2010) involved more variables in the social cognitive career choice model, such as proximal contextual influences of supports and barriers, and used a different variable, that is, goal persistence to refer to career action. However, the theoretically plausible reverse paths from T1 goal persistence (career action) to T2 outcome expectations were untested, and choice goals were not involved
in the model. Similar to most cross-sectional studies testing the proximal contextual variables within the social cognitive career choice model, Lent, Sheu et al. (2010)’s study involved college students majoring in a specific subject matter area (i.e., engineering).

**Summary, Limitations of the Previous Relevant Studies, and Directions for Future Research**

Numerous limitations and various directions for further studies can be derived from the above review of literature regarding studies examining proximal contextual variables within the social cognitive career choice model. First, several studies have used the term career choice goals and career actions (Lent et al., 2001; Lent et al., 2005), whereas other studies have operationalised career goals and actions as different constructs. Choice consideration and persistence intentions have been used to connote career goals (Lent, Brown, Nota et al., 2003; Lent, Paixão et al., 2010), while goal persistence, career planning, and career exploration have been used to represent career actions (Lent, Brown, Schmidt et al., 2003; Rogers & Creed, 2011; Rogers et al., 2008). Accordingly, the ways in which earlier career researchers operationalised goals and actions, which reflected the relevant career decision making stages, can be applied in further studies.

Second, most of the studies tested the paths from proximal contextual variables to career goals (Byars-Winston et al., 2010; Lent et al., 2001; Lent, Brown, Nota et al., 2003), or to career actions (Lent, Sheu et al., 2010; Lent et al., 2008), whereas only a small number of them investigated the relationships between contextual variables proximal to the participants and both career goals and actions (Lent, Brown, Schmidt et al., 2003; Rogers & Creed, 2011; Rogers et al., 2008). This suggests the need for further research to examine cross-sectional and longitudinal relationships between proximal
contextual influences and both career goals and career actions, within the social
cognitive career choice model.

Third, most of the studies examined career goals and career actions in specific
fields such as science, technology, engineering, and mathematics (Byars-Winston et al.,
2010; Lent et al., 2001; Lent, Brown, Nota et al., 2003; Lent, Brown, Schmidt et al.,
2003; Lent et al., 2005; Lent et al., 2011; Lent, Paixão et al., 2010; Lent, Sheu et al.,
2010). While a few studies investigated career behaviour more generally (Rogers &
Creed, 2011; Rogers et al., 2008), career behaviour in a broader spectrum within the
social cognitive career choice model warrants further research.

Fourth, in examining the roles of proximal contextual variables on career goals
and/or career actions, previous cross-sectional studies have used Lent et al.’s (1994)
view (Rogers et al., 2008) and Bandura’s (1999, 2000) proposal (Byars-Winston et al.,
2010). Other studies have compared both views (Lent et al., 2001; Lent, Brown, Nota et
al., 2003; Lent, Brown, Schmidt et al., 2003), and different studies have integrated the
two important approaches (Lent et al., 2005; Lent et al., 2011; Lent, Paixão et al., 2010).
Among the few longitudinal studies incorporating proximal contextual variables, one
study has used Lent et al.’s view only (Rogers & Creed, 2011), and the other study has
integrated both approaches (Lent, Sheu et al., 2010). While most of those studies
comparing or integrating Lent et al.’s and Bandura’s views favoured Bandura’s indirect
model (Lent et al., 2001; Lent, Brown, Nota et al., 2003; Lent, Brown, Schmidt et al.,
2003), a few other studies supported both views (Lent et al., 2005; Lent et al., 2011),
and only one study supported Lent’s view (Lent, Sheu et al., 2010). These results
suggest the need for more research to explore both views in examining how proximal
contextual variables relate to goals and actions within cross-sectional and longitudinal
social cognitive career choice models.
Fifth, while other studies used supports and barriers from parents, friends, and important others to represent proximal contextual variables, Byars-Winston et al. (2010) used perceptions of campus climate to represent contextual supports. Future research needs to explore and to use different dimensions or other types of supports and barriers, as well as more salient supports and barriers to the decision makers, as suggested in previous studies (Lent, Brown, Nota et al., 2003; Lent, Brown, Schmidt et al., 2003).

Sixth, while outcome expectations have shown inconsistent results in predicting related variables (Lent, Brown, Schmidt et al., 2003; Lent et al., 2005; Lent et al., 2011; Rogers & Creed, 2011; Rogers et al., 2008), robust support for the predictive ability of outcome expectations was evident in Lent et al.’s (2001) and Byars-Winston et al.’s (2010) cross-sectional studies and Lent, Sheu et al.’s (2010) longitudinal study. As there have been mixed results regarding the consequences of outcome expectations, future studies should integrate this variable into the social cognitive career choice model, both in cross-sectional and longitudinal studies.

Seventh, regarding the participants, most of the studies examined college students. As only few researchers have involved high school students (Lent, Brown, Nota et al., 2003; Lent, Paixão et al., 2010), future research needs to give more attention to participants who are at the earlier stage of career choice making, such as in the high school years. These years have been shown to be a phase during which students are actively contemplating educational options and career-related paths (Rogers & Creed, 2011; Rogers et al., 2008). However, whether participants are actually in the active process of career decision making is worth considering, as it affects how contextual variables relate to career goals and career actions (Lent et al., 2001; Lent, Brown, Nota et al., 2003). Hence, there is also a need for future research to involve participants who are currently considering education or career-related options.
Eighth, while there is an increasing need to explore the across-time and causal influences among variables using a longitudinal design (Lent et al., 2005; Lent, Paixão et al., 2010), interest in longitudinal research to examine the bi-directional relationships among the social cognitive career theory variables has also grown in recent years (Lent et al., 2008; Nauta et al., 2002). As research examining the reciprocal model involving proximal contextual variables within the social cognitive career choice model is lacking (Lent, Sheu et al., 2010), further research is recommended to test this model.

Ninth, the longitudinal relationships between proximal contextual variables and various career actions, such as career planning, career exploration, and goal persistence, have been receiving attention from previous researchers (e.g., Lent, Sheu et al., 2010; Rogers & Creed, 2011). However, in Rogers and Creed’s (2011) study, the reciprocal relationships among the constructs of interest in the longitudinal model were untested, whereas in Lent, Sheu et al.’s (2010) study, the reciprocal model was investigated, but not all theoretically plausible paths were examined.

Finally, in examining proximal contextual variables within the social cognitive career theory model, earlier studies have involved underrepresented participants (Lent et al., 2005; Lent et al., 2011) in the United States, and broader samples from different countries such as Italian and Portuguese high school students (Lent, Brown, Nota et al., 2003; Lent, Paixão et al., 2010). As there still are a limited number of studies testing the social cognitive career choice model involving adolescents from collectivist countries, future research should include participants from this context (Lent et al., 2001; Lent, Paixão et al., 2010). The influences from family members or significant elders in predicting adolescent choice goals and actions also warrant investigation (Lent, Brown, Schmidt et al., 2003). Although career researchers agree that parents/family can be the most influential factor in the career development process of adolescents in collectivist
cultures, little is known about the mechanisms of how parental influence affects career goals and actions of adolescents in this population.

In the section that follows, I review the features of collectivist cultures and important contextual influences in career development of adolescents in these contexts. I further summarise relevant studies in collectivist cultural contexts, present the aims of the current research program and how this research program addresses the research gaps and improves upon earlier studies, and I provide the research questions and hypotheses.

**Characteristics of Collectivist Cultures and Adolescent Career Development in These Contexts**

The difference between the collectivist and interdependent orientation, and the individualist and independent tendency, has been used to describe the psychologies of Easterners and Westerners (Heine, 2001). According to Triandis (1995), collectivists are individuals who view themselves as part of one or more in-groups, such as family, tribe, and nation, emphasise their relations to members of these groups, give priority to the goals of their in-groups, and shape their behaviours primarily on the basis of in-group norms. On the other hand, individualists are people who see themselves as independent of and loosely linked to any group, emphasise rational considerations of the cost and the benefit of socialising with others, prioritise their personal goals over the goals of other individuals or groups, and direct their behaviours based on their own desires, rights, preferences, and contracts they have arranged with others.

In a review of the independent and interdependent self and their influence on individual cognition, emotion, and motivation, Markus and Kitayama (1991) used the term independent construal of the self as a parallel label for individualism, egocentric, separate, autonomous, idiocentric, and self-contained. The core aspect of independent self-construal includes a view of the self as an autonomous and an independent individual. In addition, they used the word interdependent construal of the self to
connote relational, connected, collective, sociocentric, holistic, allocentric, contextualist, ensembled, and constitutive. Interdependent self-construal views the individual not as a separate entity from others. Individuals are motivated to be congruent with relevant others, to form and to meet obligations, and to be involved in interpersonal relationships. The concept of self-construal is depicted graphically in Figure 2.3.


The independent construal of the self is depicted in Figure 2.3 (a). The large circle represents the self, and the smaller ones represent others. The Xs represent a variety of aspects of the self or the others. In some situations, the small circle and the larger circle overlap, and there is an X in the intersection, indicating a representation of the self-in-relation-to-others; for example, "I am very polite in front of my boss." An X within the self circle, but outside of the intersection, indicates an aspect of the self perceived to be quite independent of others. These representations of the inner self usually refer to individual’s desire, attributions, preferences, or ability; for example, "I am artistic." For individuals with independent selves, these attributes are significant in
regulating behaviour, and these self-representations are thus the most elaborated in memory and the most accessible when thinking of the self. Further, the interdependent construal of the self is depicted in Figure 2.3 (b). For individuals with interdependent selves, the significant self-representations (the Xs) are those in relationship with significant others. The self-knowledge that directs behaviour is of the self-in-relation-to-others in specific contexts. The interdependent self also includes representations of invariant personal attributes and abilities. However, these representations are less important in regulating behaviour and are not considered to be indicative of the self (Markus & Kitayama, 1991).

Every individual has both collectivist and individualist components in their cognitive systems; however, the proportions are different. Individuals raised in collectivist cultural backgrounds have an augmented set of collectivist elements and a diminished set of individualist predispositions, while those who have grown up in individualist cultural contexts tend to have stronger individualist predispositions and weaker collectivist elements. When facing a situation, the former individuals are more likely to respond using a collectivist orientation, while the latter tend to respond from an individualist view, resulting in different social behaviour across cultures (Triandis, 1995).

In individualist cultures, personal agency is located within the individual, whereas in collectivist cultures, personal agency is located largely in affirmative relationships with significant others, mainly parents (Cross & Markus, 1999; Kitayama & Uchida, 2005). Accordingly, while individualists emphasise personal achievement and heterogeneity, collectivists emphasise interconnectedness and homogeneity (Uchida, Norasakkunkit, & Kitayama, 2004). Additionally, the private selves of collectivists are also much more likely to reflect goals of conformity and obedience. Therefore, the collectivists’ private selves are quite likely to be similar to their public
and collective selves (Leong, Hardin, & Gupta, 2011). In the career domain, for example, when individuals in collectivist cultures make a career decision to satisfy significant others, it is likely that they are making a decision that will satisfy themselves (Leong et al., 2011).

While people in individualist cultures are primarily motivated by their own needs, individuals in collectivist cultures are socialised to be more responsive to their in-group preference (Oettingen, 1995; Oettingen & Zosuls, 2006). They are taught to maintain harmony and to protect important relationships with others by avoiding behaviours that could threaten the relationships, such as direct confrontation (Cross, Bacon, & Morris 2000). Therefore, individuals, especially children, are motivated to fit in and adjust themselves to the expectations and needs of significant others, parents being most important (Kitayama, Duffy, & Uchida, 2007; Kitayama & Uchida, 2005).

Kim and Markus (1999) showed that individuals from collectivist backgrounds were more likely to make choices that indicated a preference for conformity, whereas their individualist counterparts preferred choices that represented uniqueness. Likewise, research in the career development area demonstrated that adolescents from collectivist cultural backgrounds show more willingness to follow their parents’ wishes, for example, preferring to select careers that are consistent with their parents’ advice rather than the ones that represent their own choices (Tang, 2002). As children are likely to consider the needs and desires of significant others in addition to their own when making important decisions (Cross et al., 2000), ignoring the wishes of parents when choosing a career is contrary to their sense of self and their value system (Hardin et al., 2001).

In collectivist cultures, the process of fitting in and getting along with significant others builds the individuals’ self-esteem and guides them to understand others by taking others’ perspectives (Kitayama & Uchida, 2005; Leong et al., 2011). Individuals
are also taught to create a social reality that makes their accomplishments noticeable to their collective (Oettingen, 1995; Oettingen & Zosuls, 2006). Therefore, they are more inclined to evaluate their accomplishment with a consideration of how those achievements reflect on important in-group members, for example, whether their academic and career attainments will make their family or parents proud of them (Markus & Kitayama, 1991).

For collectivists, in-group referenced information is important and becomes the most vital source of efficacy information, and modelling by in-group members is also prominent (Earley, 1994; Oettingen, 1995; Oettingen & Zosuls, 2006). In the career area, for example, when a youth in a collectivist culture considers a career to pursue, the self-efficacy appraisal would focus on their family’s or parents’ belief that they have the capability to be successful in a related career path, and whether parents and other members of the family might have talent for a related occupation (Oettingen, 1995; Oettingen & Zosuls, 2006).

Collectivism and interdependence characterise the deep value structure of the Asian worldview (Heine, 2001). Indonesia has one of the lowest scores for individualism on the Individualism Index (Hofstede & Hofstede, 2005). Indonesia’s score is 14 (scale ranges from 0 to 100), compared to Australia’s score of 90, which is the second highest, second to the US. Indonesia, like other Asian countries, is characterised also by a large “power distance”, where there is an acceptance of the exertion of power. In cultures where individuals are dependent on in-groups, there is usually dependence also on power figures, although there are some exceptions to this, such as Austria and Israel (small power distance combined with medium collectivism), Costa Rica (small power distance combined with strong collectivism), or France and Belgium (combined medium power distances with strong individualism). In a situation where there is a large power-distance, treating parents and older siblings as superior as
well as complying with them are norms, and individual independence is not encouraged (Hofstede & Hofstede, 2005; Oettingen, 1995; Oettingen & Zosuls, 2006).

Due to these characteristics, it makes sense that individuals in collectivist cultures consider their parents’ support, expectations, emotional consequences, and agreement when setting goals and implementing career actions. In sum, by articulating career aspirations and conducting career-related actions that accommodate the values and needs of the individual’s parents, individuals are necessarily fulfilling their own personal needs because the private and collective selves are not inherently separate. These characteristics make it reasonable to believe that in collectivist cultures, an individual’s family is crucial for adolescents in the processes of goal formulation, career choice-making, and goal implementations (Lent, 2005).

**Parental Career Expectations and Adolescent-Parent Career Congruence:**

**Important Contextual Affordances for Adolescents in Collectivist Cultures**

The cultural context provides a setting for how the process of parenting affects children’s vocational development (Bryant et al., 2006). Compared to their individualist counterparts, adolescents from collectivist cultural backgrounds perceive a more direct influence from parents on their career aspirations and decisions, and there is an obligation for them to adjust their own career-related desires to meet their parents’ approval (Leong & Serafica, 1995). This is consistent with Leong and Chou’s (1994) findings that for an individual from a collectivist cultural background, a career is an indicator of a compromise between parental expectations and individual preferences. At the same time, the adolescents themselves legitimate the influence and control from their parents and do not have any expectations that their career-related choices will be theirs alone to decide (Bernardo, 2010; Hardin et al., 2001).

Fouad et al. (2008) conducted a qualitative research project to investigate how contextual, cultural, and personal variables influence the career choices of a diverse
group of 12 Asian American participants. All participants reported that their vocational development was influenced by family expectations, which were usually perceived to be direct and specific, such as parental expectations to choose a particular career, to attain an advanced education, or to achieve a high status job. Expectations from parents were found to be salient, as these expectations influenced individuals’ career goals, interests, and work values, and the negotiation between the participants’ own aspirations and their parents’ wishes continued through to adulthood.

Shea et al. (2007) created a culturally specific career exploration group for low-income Chinese immigrant youth in the United States. The discussion in the school-based Career Exploration Development and Resources group was conducted to address career concerns of this particular youth population in relation to various social and cultural factors, and to offer social support. For participants in this study, on the one hand, family/parental expectations were found to shape participants’ career aspirations and decision making, but on the other, expectations from family and parents to succeed in school were perceived as a kind of pressure and were identified as external constraints on making career decisions. These findings suggest that not all expectations from parents are perceived to be positive by adolescents. Accordingly, there seem to be certain conditions when parental expectations are perceived as pressures and obstacles in the adolescent career decision making process.

Conflict between satisfying parental expectations to pursue a career that will ensure family unity and economic survival versus the child’s desire to find personal fulfilment in a career can place adolescents in difficult situations when deciding on a career. These findings were identified in Ma and Yeh’s (2005) study, which investigated how intergenerational family conflict and relational-interdependent self-construal influenced the career choice certainty of 129 Chinese American youths. As these youths were more likely to adopt Western values faster than their parents, conflict regarding
values and beliefs between Asian American children and their parents (i.e., intergenerational family conflict) was found to predict career indecision. High relational-interdependent self-construal, which reflects the tendency to think of oneself in terms of significant others, was found to predict career certainty.

The negative outcomes of not being congruent with parents were also revealed in Wang and Heppner’s (2002) study. Examining 99 Taiwanese university students, the authors found that students who were perceiving themselves as failing to live up to parental expectations in the areas of personal maturity, academic achievement, and dating concern, rather than simply perceiving parental expectations in these areas, were more likely to experience psychological distress. Specifically, living up to parental expectations in the academic achievement domain was associated with reduced depression and anxiety.

The discrepancy between adolescents and their parents in important life domains and its correlates were also examined in Leung et al.’s (2011) study. Involving 1343 university students in China, the authors investigated the relationships between cultural-values conflict and parental expectations and difficulties in deciding on a career among Chinese university students. Consistent with previous studies (e.g., Whiston & Keller, 2004), the findings of Leung et al.’s (2011) study revealed that individual’s contextual variables exerted an important influence on career choice and behaviour. The authors found that students who felt that they were more likely to fulfil parental expectations in the expected areas, namely, personal maturity, academic achievement, and dating concern components, tended to experience less difficulties in making career decisions than those who felt that they had not lived up to their parents’ expectations.

Compared with those experiencing a gap in the domains of personal maturity and dating, students who perceived high expectations from parents on academic achievement and believed that their performance in this area was not as expected, were
at the highest risk of experiencing difficulties in career decision-making. The authors also demonstrated that levels of cultural-value conflict were predictive of higher levels of career decision-making difficulties for students in the Chinese mainland cities, but not for students in Hong Kong, showing that the influences of contextual factors (i.e., expectations from parents), are moderated by the individual’s cultural orientation. Individuals who adopted a traditional Chinese cultural-value orientation were more inclined toward responding to parental expectations and experienced anxieties manifesting in the form of difficulties in making a career decision. On the other hand, those who adopted a Western cultural orientation were less responsive toward the same level of expectations.

The above studies showed that parental career expectations are influential in adolescent career development. Additionally, it is important for adolescents from collectivist cultural backgrounds to perceive that they are capable of having career goals and doing related actions that are congruent with parental wishes. These conditions can be experienced either by having similar goals and plans to their parents or adjusting their aspirations and plans to be in line with their parents’ expectations. However, adolescents from collectivist cultural backgrounds also anticipate reciprocities within the relationships with significant others, in particular, their parents (Kitayama & Uchida, 2005). Therefore, on the one hand, it is important for them to be in their parents’ approval range, and on the other, it is important to perceive that their parents’ actions and/or reactions, such as support and expectations, correspond with their own needs and desires.

In other research, family support has been found to be important to adolescent career development. In one qualitative study, financial support was particularly related to obtaining the necessary education required in pursuing selected career areas, whereas emotional support from their family included having discussions with parents about
career choices as well as encouragement from parents and siblings to do well at school (Fouad et al., 2008). In addition, this qualitative study revealed that family members, especially individuals from the participants’ immediate or extended family, usually served as career role models. Furthermore, family values transmitted within the family were revealed to influence career choice making, by guiding individuals to select career areas or occupations in which they are able to endorse these family values through their work. Finally, participants also received direct or indirect messages from their families related to gender roles, for example, regarding career choices that were more appropriate for women, or how to manage work and family roles. As one of the limited number of studies investigating the vocational development of individuals from collectivist cultural backgrounds, Fouad et al.’s (2008) study encourages researchers and practitioners to integrate contextual factors when working with individuals from this cultural background.

More recently, Ma and Yeh (2010) surveyed 265 urban Chinese immigrant high school students in New York City to investigate associations of individual and family factors with educational and career aspirations, career plans, and career outcome expectations. Findings indicated that together with higher self-reported English language fluency, career-related support from parents, which included instrumental assistance, career-related modelling, verbal encouragement, and emotional support were found to predict career and educational aspirations and plans to go to college. In addition, a quantitative study conducted by Cheung and Arnold (2010) also found that relational support from parents, peers, and teachers emerged as a more robust correlate of career exploration than achievement motivation in both cross-sectional and longitudinal analyses. Cheung and Arnold’s (2010) study involved a cross-sectional sample of 271 students and a longitudinal sample of 101 students doing a student internship or attending a series of career seminars in Hong Kong.
While the studies described above did not use specific theoretical frameworks, studies in the following section used social cognitive career theory as the theoretical framework in hypothesizing the relationships among the constructs of interest. Tang, Fouad, and Smith (1999) investigated the effects of acculturation, family socioeconomic status, and family involvement on self-efficacy, interests, and career choice of traditional versus non-traditional Asian American careers. The study involved 187 Asian American college students. The results demonstrated that levels of acculturation, self-efficacy, and family involvement in career issues were directly related to career choices. Directly associated with acculturation, but not with family involvement, self-efficacy showed a direct relationship with interest and career choice, while interests did not show a direct effect on career choice. The results of Tang et al.’s (1999) study demonstrated that for participants from collectivist cultural backgrounds, in this case Asian American college students, levels of acculturation, self-efficacy, and family involvement were more relevant in explaining career choices when compared to interests. As their research investigated ethnic minority samples and acculturated participants, the way in which the social cognitive career model of choice explains the career behaviours of individuals living in their own country warrants further study.

Restubog, Florentino, and Garcia (2010) surveyed 146 Philippino undergraduate students in three data collection waves. They investigated the role of T2 self-efficacy in mediating the relationship between T1 parental support and the number of career counselling sessions, experienced as two types of contextual supports, and T2 career decidedness. In this longitudinal study, the authors were also interested in examining whether T2 career decidedness mediated the relationship between T2 self-efficacy and T3 persistence. At T1, the authors collected both student ratings of support and parent ratings of support to obtain a precise description of parental support, and gathered data regarding the number of counselling session attended by participants from university
counselling archival data. They measured self-efficacy and career decidedness at T2 and persistence at T3.

Supporting Bandura’s (1999, 2000) proposal, findings indicated that the number of career counselling sessions received at T1 and T1 parental support rated by both students and parents, were related to T2 career decidedness indirectly via T2 self-efficacy; and in turn, T2 self-efficacy was found to relate to T3 persistence indirectly via T2 career decidedness. This study was able to test the applicability of the social cognitive career theory in a non-Western context, and to involve contextual variables salient to students, as suggested by an earlier study (Lent, Brown, Schmidt et al., 2003). These variables were parental support and career counselling provided by an educational institution. In addition, the authors were able to use multiple resources by obtaining both parent and student ratings of parental support, as well as using university counselling archival data in gathering information about the number of counselling sessions attended by the participants. However, the authors did not control for baseline measures of self-efficacy and career decidedness. As self-efficacy and career decidedness were collected during the same data collection point, the across-time ordering of these constructs and the possibility of reverse causation cannot be concluded. They were also unable to determine whether participants who received career counselling services at T1 also received the services or attended career workshops at T2. To address this issue, future research using more comprehensive longitudinal designs allowing more careful examination of across-time predominance and reciprocal paths among the constructs in social cognitive career theory was suggested. Weak correlations between student and parental ratings of support lead to an assumption about a gap between them in interpreting parental support. Accordingly, what is regarded as helpful by parents may not necessarily be perceived in the same way
by their children, which is an aspect of career congruence with parents that deserves further exploration in future studies.

More recently, Garcia et al. (2012) conducted a longitudinal study using social cognitive career theory as a theoretical basis. While Wang and Heppner (2002) and Leung et al. (2011) focused on the discrepancy between parents’ expectations and adolescents’ performance, Garcia et al. focused on the adolescent-parent gap in perceiving parental intended support. The authors collected data from 141 Philippino undergraduate students enrolled in a nursing program. They tested the differential moderating role of student- and parent-rated support when predicting the influence of students’ learning goal orientation on self-efficacy. As a type of contextual variable in Garcia et al.’s study, parental support was conceptualised as verbal encouragement, instrumental assistance, career-related modelling, and emotional support from a primary caregiver. Learning goal orientation, perceived parental support, and demographic characteristics were assessed at T1, whereas self-efficacy was assessed at T2, six months after the T1 survey.

The results demonstrated that participants who had a high level of learning goal orientation were likely to have higher self-efficacy. Additionally, high student ratings of parental support bolstered the relationship between learning goal orientation and self-efficacy, whereas low levels of parent-rated support strengthened the association between learning goal orientation and self-efficacy. The latter finding suggests that adolescents and their parents may have different perceptions about supportive behaviour, and that this variation may lead to differential effects on learning goal orientation and self-efficacy.

Garcia et al.’s (2012) study extends the applicability of the social cognitive career theory in a non-Western context by focusing on the interaction between a person variable (i.e., learning goal orientation) and a contextual factor (i.e., perceived parental
support), in predicting self-efficacy. Providing evidence for the differential moderating effects of parental support, the study shows that in fostering adolescent self-efficacy in a collectivist country, the anticipated consequence of parental actions will be met only if there are few discrepancies between parents and their adolescent children in construing parents’ intended support. However, the authors did not collect a baseline measure for self-efficacy at T1. Therefore, causality assumptions cannot be determined and the bi-directional relationships among the variables cannot be explored. It was also recommended for future research to include more social cognitive career theory variables in studies with participants from collectivist cultures.

Summary, Limitations of Relevant Studies in Collectivist Contexts, and Directions for Future Research

All studies reviewed above demonstrated that parental variables are prominent in explaining adolescent career behaviours in collectivist cultures. These studies also showed that parental career expectations have the potential for explaining adolescent career development in a collectivist society (Fouad et al., 2008; Shea et al., 2007). Several aspects of congruence with parents regarding career matters, such as perceiving themselves as being able to live-up to parental expectations and being supported by parents, have also been shown to be important for adolescent career development in this cultural setting (Garcia et al., 2012; Leung et al., 2011; Wang & Heppner, 2002). However, other types of congruence with parents regarding career matters, such as possessing similar goals and plans and being able to make parents happy, proud, or satisfied, need to be explored.

Although social cognitive career theory has been widely used in Western countries/individualist cultures, it has been applied less to explain career behaviours of adolescents from non-Western countries. Only three of the studies reviewed above have used social cognitive career theory as the theoretical framework to explain the
relationships between proximal contextual variables and career outcomes (Garcia et al., 2012; Restubog et al., 2010; Tang et al., 1999). These studies showed the important role of different types of family/parental variables (i.e., parental involvement and perceived parental support) in promoting adolescent self-efficacy, career choice (goals), and persistence (actions) in participants from collectivist cultural backgrounds. It was also demonstrated that interests were not as vital as the parental variable, that is, involvement in predicting adolescent career development (Tang et al., 1999). While Tang et al.’s (1999) study involved ethnic minority participants in the United States, Restubog et al. (2010) and Garcia et al.’s (2012) studies recruited participants from a collectivist country, such as the Philippines. The limited number of social cognitive career theory-based studies in collectivist countries suggests the need for more research involving participants from collectivist contexts.

In studies using social cognitive career theory as a framework, researchers were inconsistent in conceptualising contextual variables in their study. In measuring parental support, Restubog et al. (2010) and Garcia et al. (2012) used a scale that captures verbal encouragement, instrumental assistance, career-related modelling, and emotional support. According to social cognitive career theory (Lent et al., 1994), role modelling is categorised as a distal contextual variable, while encouragement, instrumental assistance, and emotional support are proximal contextual variables. Future researchers using social cognitive career theory as the theoretical framework should clearly demonstrate whether they intend to assess distal or proximal contextual variables.

**Aims of the Current Research Program**

This current research program aimed to address existing gaps in the literature and extend current understanding of the effect of proximal parental contextual influences on career development of adolescents in collectivist cultures. The first aim of this research program was to develop a valid and reliable scale to measure congruence
with parents regarding career matters. To achieve the first aim, Study 1 was designed to develop and to test the initial validity of a measure to assess adolescent-parent career congruence. This scale was developed based on the notion that parents are adolescents’ partners in career development processes (Otto, 2000), and was also based on an interactionist approach to adolescent development (Bronfenbrenner, 1979, 1986, 1994; Vondracek et al., 1986). The concept of adolescent-parent career congruence is derived from Kristof’s (1996) person-organisation fit in the organisational domain.

The second aim of this research program was to examine the cross-sectional relationships between proximal parental contextual variables (parental career expectations and adolescent-parent career congruence) and career aspirations and the career actions of planning and exploration of adolescents in a collectivist cultural context, using the social cognitive career choice model. The third aim was to investigate the across-time relationships among the study variables. Accordingly, Study 2 was designed to achieve the second aim, and Study 3 was conducted to attain the third aim.

In Study 2 and Study 3, parental contextual variables proximal to adolescent career behaviour in collectivist cultures (i.e., parental career expectations and adolescent-parent career congruence) were integrated into the social cognitive career choice model, together with self-efficacy, outcome expectations, career aspirations, career planning, and career exploration. The relationships between proximal parental contextual variables and career aspirations and the career actions of planning and exploration in Study 2 and Study 3 were examined based on two views of Bandura (1999, 2000) and Lent et al. (1994). In these studies, career aspirations were used to connote career goals, and career planning and career exploration were employed to represent career actions.

In addition, the construct of adolescent-parent career congruence was defined as the perceived compatibility, that is, the degree to which the adolescents perceive parents
as fulfilling career exploration, career planning, and career goal setting needs, and the degree to which they perceive parents to be happy, proud, satisfied, or agreeable with their career progress, and the perceived similarity between adolescents and their parents, that is, the degree to which the adolescents perceive that their parents have similar or matching ideas regarding career interests, career values, career plans, and career goals. In these studies, the construct of adolescent-parent career congruence was assessed by the new scale developed in Study 1.

In Study 2, the social cognitive career choice model was tested cross-sectionally, involving Indonesian Grade 10 high school students as participants, and in Study 3, the model was examined longitudinally, when the participants were actually at their active phase of career-related decision making process. The data were collected at two time points, first, when the participants were in Grade 10 and were considering which major to choose. The second data collection was six months after the first one, when the participants were in Grade 11 and had selected their chosen major. Further, Study 3 used a cross-lagged panel design to allow the examination of the reciprocal relationships among the constructs of interest in the longitudinal model. In Study 3, all plausible paths in the model were tested. The research questions and hypotheses posed in this research program are described in the following section.

**Research Questions and Hypotheses**

**Study 1:** To what extent can a reliable scale to measure adolescent-parent career congruence be developed, and to what extent can evidence of initial validity be established?

**Study 2:** Within a cross-sectional social cognitive career choice model, in what ways are perceived parental career expectations and perceived adolescent-parent career congruence associated with adolescent career aspirations and the career actions of planning and exploration in a collectivist cultural context?
Hypothesis 1: Both parental contextual variables (i.e., parental career expectations and adolescent-parent career congruence) were expected to be associated positively with career aspirations directly and indirectly, by way of self-efficacy.

Hypothesis 2: Both parental contextual variables (i.e., parental career expectations and adolescent-parent career congruence) were expected to be associated positively with career planning, directly and indirectly by way of self-efficacy and career aspirations.

Hypothesis 3: Both parental contextual variables (i.e., parental career expectations and adolescent-parent career congruence) were expected to be associated positively with career exploration, directly and indirectly by way of self-efficacy and career aspirations.

**Study 3:** Within a longitudinal social cognitive career choice model, which one of these models, that is, a standard causal model that includes unidirectional paths, or a reciprocal model that involves bi-directional paths, shows the best fit to explain the longitudinal relationships among the constructs of interest for this study?

Hypothesis 4: The reciprocal model was expected to demonstrate the best fit over and above the baseline model and the standard causal model to explain the longitudinal relationships among the constructs of interest.

The basic social cognitive career theory hypotheses in the reciprocal model are as follows:

Hypothesis 5: T1 parental career expectations and T1 adolescent-parent career congruence were expected to predict T2 career aspirations.

Hypothesis 6: T1 parental career expectations and T1 adolescent-parent career congruence were expected to predict T2 self-efficacy.

Hypothesis 7: T1 self-efficacy was expected to predict T2 outcome expectations.

Hypothesis 8: T1 self-efficacy and T1 outcome expectations were expected to predict T2 career aspirations.
Hypothesis 9: T1 parental career expectations and T1 adolescent-parent career congruence were expected to predict T2 career planning.

Hypothesis 10: T1 self-efficacy and T1 outcome expectations were expected to predict T2 career planning.

Hypothesis 11: T1 parental career expectations and T1 adolescent-parent career congruence were expected to predict T2 career exploration.

Hypothesis 12: T1 self-efficacy and T1 outcome expectations were expected to predict T2 career exploration.

Hypothesis 13: T1 career aspirations were expected to predict T2 career planning and T2 career exploration.

Additionally, the reverse-direction hypotheses in the reciprocal model are as follows:

Hypothesis 14: T1 outcome expectations were expected to predict T2 self-efficacy.

Hypothesis 15: T1 career planning and T1 career exploration were expected to predict T2 self-efficacy.

Hypothesis 16: T1 career planning and T1 career exploration were expected to predict T2 outcome expectations.

Hypothesis 17: T1 self-efficacy was expected to predict T2 parental career expectations and T2 adolescent-parent career congruence.

The reciprocal model tested the basic social cognitive career theory hypotheses and the reverse-direction hypotheses, as depicted in Figure 2.4.
In the chapters that follow, the results of the three studies are presented. The first study, reported in Chapter 3, describes the development and initial validity assessment of a measure to assess congruence with parents regarding career matters. Subsequently, Study 2 is reported in Chapter 4. The second study examines the associations between proximal parental contextual variables (i.e., parental career expectations and adolescent-parent career congruence) and adolescent career aspirations and the career actions of planning and exploration in a collectivist cultural context, within the social cognitive career choice model. The third study, reported in Chapter 5, investigates the longitudinal relationships among the study variables. Finally, Chapter 6 discusses the three studies in this research program.
Chapter 3 reports on the development and initial validation of the Adolescent-Parent Career Congruence Scale, which was conducted in Study 1. This study involved 1062 Indonesian high school students. An article based on Study 1 has been published in the *Journal of Career Assessment*, and the related notification of publication is included in Appendix H. Slight modifications have been made to the published version, including the numbering of the tables and the list of references. I have numbered the tables to match Chapter 3 and integrated all references for Study 1 into the reference section at the end of this thesis. The Adolescent-Parent Career Congruence Scale developed in Study 1 was then used in Study 2 (included as Chapter 4) and Study 3 (included as Chapter 5).

Additionally, Study 1 was presented as a poster at the 22nd *International Society for the Study of Behavioural Development (ISSBD) Biennial Meeting* in Edmonton, Alberta, Canada from 8-12 July 2012. The confirmation of acceptance of the poster is included in Appendix I.
THE ADOLESCENT-PARENT CAREER CONGRUENCE SCALE:
DEVELOPMENT AND INITIAL VALIDATION

Abstract

Although there is a growing interest in the discrepancy between parents and their adolescent children in relation to career expectations, there is no existing, psychometrically sound scale that directly measures adolescent-parent career congruence or incongruence. This study reports the development and initial validation of the Adolescent-Parent Career Congruence Scale. Phase 1 utilised a review of literature, focus groups, and expert feedback to formulate 20 items. In Phase 2, with a sample of 550 students, item and exploratory factor analyses were employed to reduce the number of items to 12, which represented two reliable subscales. In Phase 3, with a second sample of 512 students, confirmatory factor analyses were conducted to test the initial structure. In Phase 4, the construct validity was examined by correlating the total and subscale scores with measures of parental support, living-up-to parental expectations, and life satisfaction. The implications for use in research and practice are discussed.

Keywords: adolescent-parent career congruence, scale development, high school students, parents, career development
Families, especially parents, have a strong effect on the career development of their adolescent children (Whiston & Keller, 2004). One aspect of this influence is captured by measuring whether parents and adolescents agree about the adolescents’ career goals and aspirations. Such agreement is not always easy to achieve because it relies on parents and adolescents knowing each other’s preferences and communicating them. Agreement should be a correlate of positive career development, as research has shown that when there is agreement between parental and adolescent goals and aspirations, career development for adolescents is more positive (Otto, 2000), and when there are career-direction differences between parents and adolescents, adolescent career development is hampered (Leung, Hou, Gati, & Li, 2011). Although this research is promising, it has been limited because there is no existing, psychometrically sound scale that directly measures parent-adolescent career congruence or incongruence. One existing scale assesses adolescents’ capacity to meet parental expectations (Wang & Heppner, 2002), and other scales incorporate aspects of career congruence, such as including dissonance as a barrier to career decision-making (Gati, Krausz, & Osipow, 1996), including capacity to deal with external influence as an efficacious action (Fouad, Smith, & Enochs, 1997), and including congruence as a desirable outcome (McWhirter & Metheny, 2009). The present study reports on the development and initial validation of a new scale that can assess adolescent-parent career congruence.

**The Role of Parents in Career Development**

Previous researchers have demonstrated the important role of parents in adolescents’ career development (Keller & Whiston, 2008). First, parents influence the development of their adolescent children’s values, interests, and skills, and have a vital role in the development of motivation and maintenance of effort to achieve career goals (Duffy & Dik, 2009). For example, Ashby and Schoon (2010) found that parental background and parental educational aspirations were important influences that shaped
adolescent career aspirations and educational performance. Second, parents make a significant contribution to adolescents’ career preparation (Perry, Liu, & Pabian, 2010). Previous studies have shown how child-oriented parenting affects career exploration (Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002; Noack, Kracke, Gniewosz, & Dietrich, 2010) and the career decision-making process (Constantine, Wallace, & Kindaichi, 2005). Finally, parents are crucial to helping adolescents establish career goals and aspirations, and central to providing input on how these career goals might be met (Tynkkynen, Nurmi, & Salmela-Aro, 2010). For example, Restubog, Florentino, and Garcia (2010) found that parental support was important in influencing academic persistence, and Young et al. (2001) demonstrated that parent-adolescent communication facilitated career goal-setting and the development of strategies to realise these aspirations.

Parents engage intentionally in various actions to facilitate their children’s career development (Young & Friesen, 1992), and have goals themselves about the values they would like their children to develop and the types of lives they would like their children to live (Dix & Branca, 2003). At the same time, adolescents themselves view their parents as dominant references, and hold perceptions of how parents should contribute to their vocational development (Phillips, Christopher-Sisk, & Gravino, 2001). Otto (2000) reported that adolescents perceived their parents as partners in the career development process, and the ones they were most likely to interact with concerning their career issues. Specifically, adolescents consider that their parents should be involved when they make career decisions (Phillips et al., 2001), and when they formulate education and occupational goals (Tynkkynen et al., 2010).

While parents are influential in adolescent career development, and adolescents welcome parental input, the general developmental literature also supports the view that parents and adolescents often differ on expectations and the beliefs they hold about one
another. For example, parents and adolescents differ on the amount of influence they believe that parents should have in making important decisions (Daddis & Smetana, 2005; Zimmer-Gembeck, Ducat, & Collins, 2011), and differ on when parental influences should reduce and adolescent autonomy should increase (Feldman & Wood, 1994); both of which reflect general ways by which adolescents and parents find themselves “not on the same page” (Butner et al., 2009, p. 836). Consistent with this, recent research has shown that, while parental support may facilitate greater career decision-making self-efficacy, the benefit of the support is contingent on the adolescents construing what the parents are doing as support (Garcia, Restubog, Toledano, Tolentino, & Rafferti, 2012). While specific parental guidance could be interpreted as pressure by some adolescents, the absence of parental pressure might be identified as a lack of support by others (Altman, 1997). Given that any environmental variable, such as support, barriers, and resources, might be subject to interpretation by the individual as enhancing or constricting agency in their career development (Lent, Brown, & Hackett, 2000), the intended effect of parental behaviours will be achieved only if the supportive behaviours are perceived in the same way by the adolescent and the parent.

Consistent with Bronfenbrenner’s (1986) ecological systems theory, individuals will be better adjusted and more satisfied in environments that match their attitudes, values, goals, and experiences; that is, they will be more satisfied when there is a fit between themselves and their environment (Swanson & Fouad, 1999). Being congruent with one’s parents on career matters reflects a fit between adolescents and their family environment in this domain. Such a fit is likely to facilitate and foster career development (Duffy & Dik, 2009; Phillips et al., 2001). Incongruity, or lack of fit, on the other hand, which has been identified as a potential external barrier when choosing a career (Gati et al., 1996; Schultheiss, Kress, Manzi, & Glasscock, 2001), has the
potential to disrupt career development and contribute to poorer adjustment and well-being in the adolescent (Wang & Heppner, 2002).

Thus, research on the correspondence between the resources provided by parents and the needs of adolescent, or vice versa, and possession of matching characteristics, whether it be conceptualised as adolescent-parent congruence/incongruence, or adolescent/family environmental fit, is an important area. However, there is currently no scale to assess this correspondence. For this area of research to progress, a scale to measure adolescent-parent career congruence is required. The current study was designed to develop an instrument that measures adolescent-parent career congruence, and to test initial validity evidence in relation to other constructs.

**Previous Measures of Adolescent-Parent Congruence/Discrepancy**

Compatibility between parent and adolescent values, aspirations, and goals has been assessed by previous researchers by asking participants to indicate how closely their ideas agree or disagree with their parents’ ideas about the kind of occupation they should enter, how they should prepare for a career, and how they should value education (Otto, 2000). However, no specific instrument has been developed.

Several researchers have included adolescent-parent career disparity items in career indecision measures. These items reflect disapproval by others, and refer primarily to concern over conflicts with significant others regarding a career choice (e.g., Career Decision Scale; Osipow, Carney, Winer, Yanico, & Koschier, 1976), a gap between one’s career preferences and the preferences voiced by significant others (e.g., Career Decision-Making Difficulties Questionnaire; Gati, et al., 1996), and disagreement with significant others concerning one’s career direction (e.g., Korean Career Indecision Inventory; Tak & Lee, 2003). Other researchers have operationalised adolescent-parent career discrepancies as barriers that block preferred career choices (e.g., My Vocational Situation; Holland, Daiger, & Power, 1980; and the Career
Barriers Inventory; Swanson & Tokar, 1991). Still others have operationationalised adolescent-parent incongruity as adolescents’ capacity to resist attempts by significant others to force them into a career that is perceived as unsuitable (e.g., Middle School Career-Decision Making Self-Efficacy Scale; Fouad et al., 1997), or to seek family confirmation of choices being made (e.g., Vocational Outcome Expectations Scale - Revised; McWhirter & Metheny, 2009).

One scale, the Living-up to Parental Expectation Inventory (Wang & Heppner, 2002), was devised to measure how well adolescents were living-up-to their parents’ expectations in three domains: personal maturity, academic achievement, and career and personal relationships. The scale generates a living-up-to parental expectation score by subtracting perceived parental expectations from the corresponding perceived adolescent performance rating. The scale was specifically developed for use with Chinese adolescents to assess the unequal roles of adolescents and parents in that culture. However, previous research has shown that children from different cultural heritages are faced with different kinds of parental expectations in adolescence and adulthood, and that living-up-to parental expectations has implications regardless of cultural differences (Oishi & Sullivan, 2005). Finally, a recent study by Hou and Leung (2011) examined discrepancies between the expectations of parents and the aspirations of children according to occupational field, prestige, and gender-type of occupations. Rather than use a scale to measure adolescent-parent discrepancies, the researchers had parents and high school students rate the desirability of 126 occupations, which were evenly spread over the six Holland interest types, and calculated discrepancy scores from these two ratings.

Adolescent-Parent Career Congruence

The fit between an individual and the environment reflects an interactionist perspective (Bronfenbrenner, 1986), which stresses that behaviour is the result of a
reciprocal relationship between the individual and the environment. Traditionally, two subdomains have been considered as important components of fit (Kristof, 1996). The first of these is complementary fit, which occurs when the individual’s characteristics “make whole” the environment or contribute to what is missing (Muchinsky & Monahan, 1987, p. 271); that is, when individuals provide what the other needs or wants. The second subdomain is supplementary fit, which occurs when individuals have characteristics similar to or match those of others in their environment; that is, when individuals perceive themselves to be like others around them, regarding their values, goals, personality, and attitude (Cable & Edwards, 2004; Muchinsky & Monahan, 1987; Sekiguchi, 2004). Conceptualising person-environment fit by integrating the complementary and supplementary aspects was used by Kristof (1996) when defining fit in the organisational domain: fit is “the compatibility between people and organisations that occurs when: (a) at least one entity provides what the other needs [complementary fit], or (b) they share similar fundamental characteristics [supplementary fit], or (c) both” (pp. 4-5). We drew on this model when developing the adolescent-parent career congruence scale.

Kristof (1996) conceptualised complementary fit as needs-supplies and demands-abilities fit. First, needs-supplies fit refers to the situation that occurs when the needs of the individual (i.e., in our case, the adolescent) is met by the support from others (i.e., the parents) in the environment. Previous studies have shown that some kinds of parental support are more appropriate than other kinds in enhancing adolescent career development (e.g., Keller & Whiston, 2008); however, how well the support provided by parents fits the needs of the adolescent has not been captured in a scale. Second, demands-abilities fit refers to the state that is achieved when the individual (i.e., again, the adolescent) has the ability to meet the demands of the environment (i.e., meet parent expectations). Many researchers have shown that parental expectations
influence the career decisions of adolescents (e.g., Fouad et al., 2008). However, whether the expectations of parents correspond with the adolescents’ capacity and attempts to meet them has not been integrated into a scale.

From Kristof’s (1996) perspective, supplementary fit refers to the similarity and match of adolescent and parents regarding career interests, plans, goals, and values. Researchers have identified that parents are a major source of knowledge and beliefs about occupations (Bryant, Zvonkovic, & Reynolds, 2006), and young people often report similar ideas to their parents about the preparation needed for occupations, career decision making, and the value of education (Otto, 2000). Discussion between parents and their children potentially enables them to construct a shared perspective about the adolescents’ career plans and goals, which can affects the process of choosing a career and deciding on particular pathways (Li & Kerpelman, 2007; Young et al., 2006). However, no existing measure captures the idea of character similarity and correspondence between adolescents and their parents.

The development and initial validation of the adolescent-parent career congruence measure followed a standard pattern for psychometric instruments. A literature review was conducted and focus group discussions were held with high school students. These processes helped ensure that the career congruence issues incorporated in the scale were specific to the experience of the population to be assessed. Feedback on the items was sought from experts to assess their content validity. An item analysis and exploratory factor analysis on one half of our data reduced the number of items from 20 to 12. Confirmatory factor analyses on the second half of our data confirmed the factor structure. The reliability and initial validity of the final measure were then assessed.
Phase 1 - Item Development

The aim of this phase was to generate sufficient items to form the basis for the new scale. The target was to develop approximately twice as many items as might appear in the final scale (Hinkin, 1998; Kline, 2000). Items were generated following a review of the literature (e.g., Kristof, 1996; Leung et al., 2011) and after a series of four focus groups. The first author, an Indonesian national, conducted the focus groups (two mixed-gender groups, one group of girls only, one of boys only) with 29 Year 10 students (11 boys and 18 girls, aged 15-16 years) from a state high school in Central Java, Indonesia. The aims of the focus groups were to engage with the target participants to enhance the content validity of the scale items and to help validate the key dimensions of the construct (Vogt, King, & King, 2004). The students were asked to discuss their own career aspirations, their parents’ aspirations for them, the ways in which their aspirations were consistent with, or different from, their parents’ aspirations and expectations, and how these consistencies or differences might affect their career development. The focus groups were audio-taped for later reference.

Following the literature review and focus groups, we generated 30 items, which were written in English, and included both positively and negatively worded items to minimise monotony and response set bias (Schriesheim & Hill, 1981). All items were then shown to four independent reviewers, who had expertise in career development and test development. The independent reviewers were asked to rate the suitability of each item to tap a particular domain of the construct and to comment generally on the items as to their phrasing and readability. Subsequent to this, we removed 10 items that were considered redundant, overlapping, or irrelevant, leaving a final list of 20 items consisting of 15 positively worded items and five negatively worded items.

We used the parallel, back-translation procedure (Brislin, 1986) to convert these 20 items into the Indonesian language. First, the scale was translated into Bahasa by two
native Indonesian speakers, who also spoke English. Second, two monolingual
Indonesian speakers checked the readability of the translated version of the scale. Third,
the scale was back-translated into English by two native Indonesian speakers who also
spoke English and who had not read the measures previously. Fourth, the two back-
translated versions were compared with the original English version for accuracy of
meaning, and inaccurately translated items were revised. Finally, three Indonesian high
school students tested the readability of the final Indonesian language scale.

Phase 2 - Item Analysis and Exploratory Factor Analysis

The aim of this phase was to identify items to be retained in the scale using item
analysis and exploratory factor analysis.

Method

Participants. We obtained data from 1062 Year 10 students who were recruited
from three middle socio-economic status state high schools in Semarang, Central Java,
Indonesia. To avoid sample-specific results from our factor analyses that could
potentially affect reliability and validity, and to allow for a cross-validation of results,
we followed the recommendation of Byrne (2010), and divided this large sample into
two subsamples using a random split procedure. Sample A ($N = 550$) was used for the
Phase 2 item analysis and exploratory factor analysis, and Sample B ($N = 512$) was used
for the confirmatory factor analyses in Phase 3. Using a cross-validation sample
assesses how well the original model can be generalised. If a model can be generalised,
then the same set of questions should be capable of assessing the same constructs in
other samples (van Prooijen & van der Kloot, 2001). Sample A consisted of 292 girls
(53.1%) and 258 boys (46.9%), whose mean age was 15.94 years ($SD = .52$). A large
majority (452; 82.2%) reported that they planned to choose the Natural Sciences major
in Year 11, 94 (17.1%) planned to choose Social Sciences, and 4 students (0.7%)
intended to enrol in the Languages stream. It is usual for most students to select the
Natural Sciences as an option for Year 11, as this pathway keeps almost all further education options. Only a small proportion (11.8%) had part-time jobs while at school, which is typical for Indonesian students at high school. Sample B consisted of 286 girls (55.9%) and 226 boys (44.1%), whose mean age was 15.92 years ($SD = .49$). Four hundred and twenty students (82%) reported that they intended to choose the Natural Sciences major in Year 11, 87 (17%) planned to choose Social Sciences, and five students (1%) wanted to choose the Languages stream. A small proportion (10.9%) reported part-time jobs while at school.

We tested to confirm that there were no differences between Sample A and Sample B on any of the demographic variables as a result of the random split. We found no difference on any of the variables, of age, $t(1060) = .46, p = .65$, gender, $\chi^2(1) = .82, p = .37$, school, $\chi^2(2) = 6.93, p = .06$, work experience, $\chi^2(1) = .20, p = .65$, socio-economic status, $\chi^2(4) = 1.71, p = .79$, school achievement, $t(1060) = -.52, p = .60$, and major that would be chosen $\chi^2(2) = .20, p = .65$, indicating no bias in the two samples based on these variables resulting from the random split.

**Materials.** The 20 items generated in Phase 1 were used in this phase. These 20 items were expected to reflect two domains of congruence, namely complementary congruence (reflecting needs-supplies and demands-abilities congruence) and supplementary congruence (reflecting similarity and match of adolescent and parents). Example items were, “My parents encourage me to explore career areas I am interested in” (needs-supplies congruence), “My parents expect me to pursue a career that is too difficult for me to get into” (demands-abilities congruence), “The career plans I have for myself are similar to the plans that my parents have for me” (supplementary congruence). The adolescents were asked to respond to each item using a Likert-type format, with options that ranged from 1 (*strongly disagree*) to 6 (*strongly agree*).
Procedure. The 20 items were administered in a survey along with scales tapping parental support, living-up-to parental expectations, and life satisfaction, which were used to test for construct validity and are reported in Phase 3. We also collected demographic data on age, gender, socio-economic status, work experience, school achievement, and anticipated study major. The survey was administered by teachers and the first author in class time at school. This study was conducted with approval from the authors’ university ethics committee. Both parents and students gave their permission for the students to participate. Prior to the data collection, a parent or guardian signed a consent form agreeing to their child’s participation in the study, and the child signed his/her own consent form. Children who did not take part in the study were set another activity by the class teacher.

Results

Item analysis. Four indices were used to identify possible items for deletion during item analysis. First, we assessed item skew, to identify any item whose distribution demonstrated floor or ceiling effects. Second, we examined the inter-item correlations to identify any pairs of items that were too highly correlated \((r \geq .80)\), which might indicate redundancy. Third, we examined the corrected item-total correlations to identify any items with a weak or negative correlation \((r < .30)\) with the total scale, which might indicate items that were not tapping the construct of career congruence. Finally, we compared boys and girls on each item to identify items that might be responded to differently depending on gender (Kline, 2000). In this process, no items were identified as problematic; thus, no items were removed as a result of the item-analysis.

Exploratory factor analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (.91) and statistically significant Bartlett’s test of sphericity \((p < .001)\) indicated that the 20 items were suitable for factor analysis. As the common
variance is of interest in determining the underlying factor structure, we used common factor analysis; that is, principal-axis factor analysis (Hair, Black, Babin, & Anderson, 2010). As the two anticipated factors were expected to be correlated domains of an overall congruence measure, we utilised a direct oblimin rotation (Hair et al., 2010; Reise, Waller, & Comrey, 2000). As recommended by Hayton, Allen, and Scarpello (2004), Kahn (2006), and Patil, Singh, Mishra, and Donovan (2008), we considered a combination of decision rules to determine the number of factors to be retained, including the scree plot, Velicer’s minimum average partial test, parallel analysis (O’Connor, 2000), a minimum of three items loading on a factor (Costello & Osborne, 2005), and the interpretability of the factors (Hinkin, 1998).

In the first exploratory factor analysis, we found that the five negatively worded items, which contained items from both the complementary and supplementary domains, loaded onto a single factor. As this result was likely to reflect a context-dependent item set for the negatively worded items (i.e., the items covary because of an underlying contextual influence, that of negative wording), and not reflect a genuine independent factor (Haladyna, 1992; Higgins, Zumbo, & Hay, 1999), the five items were deleted from the analysis.

In the second exploratory factor analysis with the remaining 15 positively worded items, the scree plot indicated two factors with eigenvalues > 1.0. Velicer’s minimum average partial test and the parallel analysis also suggested a two-factor solution, and, as these two item groupings were interpretable theoretically, two factors were accepted. Subsequent to these analyses, three items were removed from the solution as the factor loadings were < .4 and/or less than twice as strong on the appropriate factor as on the other factor (Hinkin, 1998). The remaining 12 items accounted for 57.60% of the variance: Factor 1 = 44.30% and Factor 2 = 13.30%. See Table 3.1 for factor loadings and eigenvalues.
### Table 3.1

**Factor Loadings for the Adolescent-Parent Career Congruence Scale; Sample A (N = 550)**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1: Complementary Congruence</th>
<th>Factor 2: Supplementary Congruence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My parents encourage me to explore the career areas I am interested in</td>
<td>.81</td>
<td>-.03</td>
</tr>
<tr>
<td>2. My parents support me in my career plans</td>
<td>.74</td>
<td>-.05</td>
</tr>
<tr>
<td>3. My parents show me how to get the information I need for my career interests (e.g., go to career exhibition, see someone)</td>
<td>.67</td>
<td>-.05</td>
</tr>
<tr>
<td>4. My parents approve of the plans I am making for my future career</td>
<td>.63</td>
<td>-.11</td>
</tr>
<tr>
<td>5. The progress I have made towards my career goals makes my parents happy</td>
<td>.62</td>
<td>.07</td>
</tr>
<tr>
<td>6. My parents help me to explore my career interests (e.g., by buying me books, taking me to career fairs)</td>
<td>.58</td>
<td>-.16</td>
</tr>
<tr>
<td>7. My parents are satisfied with the effort I have put in so far to achieve my career goals</td>
<td>.51</td>
<td>.07</td>
</tr>
<tr>
<td>8. My parents want the same career for me as I want for myself</td>
<td>-.10</td>
<td>-.82</td>
</tr>
<tr>
<td>9. My parents and I have similar career interests</td>
<td>-.07</td>
<td>-.79</td>
</tr>
<tr>
<td>10. The career plans I have for myself are similar to the plans that my parents have for me</td>
<td>.15</td>
<td>-.68</td>
</tr>
<tr>
<td>11. I am interested in the career areas that my parents expect me to enter</td>
<td>.09</td>
<td>-.66</td>
</tr>
<tr>
<td>12. My parents and I have the same way of defining career success</td>
<td>.23</td>
<td>-.49</td>
</tr>
</tbody>
</table>

**Eigenvalues**

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.32</td>
<td>1.60</td>
</tr>
</tbody>
</table>

**% variance explained**

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.30</td>
<td>13.30</td>
</tr>
</tbody>
</table>

*Note. Main loadings highlighted in bold.*
Consistent with the definition of complementary fit as the compatibility between the individual and the environment, which happens when at least one entity offers what the other needs (Kristof, 1996), high scores on Factor 1 (7 items), named “complementary congruence”, reflect the situation where adolescents perceive their needs in exploration, planning, and goal setting to be met by parents, and their perception that parents are satisfied with their progress ($\alpha = .85, M = 32.77, SD = 5.01$, range = 12-42). Relevant to the concept of supplementary fit as the situation when the individual and others share similar basic characteristics (Kristof, 1996), high scores on Factor 2 (5 items), named “supplementary congruence”, capture the situation when adolescents believe that they possess similar or matching perceptions as their parents regarding career interests, values, plans, and goals ($\alpha = .84, M = 20.89, SD = 4.41$, range = 5-30). The moderate correlation between the two factors ($r = .55, p < .01$) was consistent with the results from the exploratory factor analysis. The subscales were independent, although the correlation also showed that there was some overlap between them. The internal reliability coefficient for the full scale was .88.

**Phase 3 - Confirmatory Factor Analyses**

The aim of this phase was to confirm the factor structure of the Adolescent-Parent Career Congruence Scale on Sample B. We tested the factor structure using confirmatory factor analysis, assessed whether the two factors loaded onto a second-order factor, and compared these models with a one factor model.

**Method**

**Participants.** We used the 512 students in Sample B in this Phase.

**Materials.** The 12-Item Adolescent-Parent Career Congruence Scale described in Phase 2 was used in these analyses. The internal reliability coefficient of the full scale with this sample was .87. The scale consists of the complementary congruence subscale.
(α = .83, $M = 32.21$, $SD = 4.81$, range = 14-42) and the supplementary congruence subscale (α = .80, $M = 21.24$, $SD = 4.18$, range = 8-30).

**Results**

We used confirmatory factor analysis (AMOS Version 4.0; Arbuckle & Wothke, 1995) to validate the factor structure of the 12-item Adolescent-Parent Career Congruence Scale identified in Phase 2. Confirmatory factor analysis examines how well the obtained data fit a proposed factor structure (van Prooijen, & van der Kloot, 2001).

Model fit was assessed using the $\chi^2$ value and the associated degrees of freedom, Goodness of Fit (GFI), the Comparative Congruence Index (CFI), Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA), as recommended by Hair et al. (2010). With more than 250 participants and 12 observed variables, a significant $\chi^2$ value is acceptable, with GFI values > .90, and CFI and TLI values > .92 indicating an acceptable fit to the data. The RMSEA takes into account the error of approximation, with values less than .07 indicative of a satisfactory fit. As the $\chi^2$ value is sensitive to sample size, assessing $\chi^2$ divided by the degrees of freedom is also recommended as a measure of model fit, with a ratio of 3:1 or less related to better-fitting models (Hair et al., 2010).

We tested three models (a) a 2-factor model representing the two factors identified in Phase 2, (b) a second-order model, in which a single, second-order latent variable represented the two factors, and (c) a single-factor model where all items were allowed to load onto a single latent variable. In the first model, we tested two factors, in which each cluster of seven and five items identified in Phase 2 was allowed to load freely on its respective latent factor, and the correlations among the two factors were freely estimated. The fit statistics for this model were, $\chi^2 = 108.37$, $df = 42$, $p < .001$, $\chi^2/df = 2.58$, GFI = .98, CFI = .99, TLI = .98, and RMSEA = .04, indicating a
satisfactory fit for the data. All factor item loadings were statistically significant \((p < .001)\) and ranged from .37 to .87 (complementary congruence), and .56 to .84 (supplementary congruence).

Second-order factors can be used to assess the relationships among factors at the preceding level (Hair et al., 2010), in this case, assessing whether the two latent variables of complementary congruence and supplementary congruence are related in such a way they can be represented by a single congruence construct. The fit statistics for this model were, \(\chi^2 = 123.71, df = 45, p < .001, \chi^2/df = 2.75\), GFI = .98, CFI = .99, TLI = .98, and RMSEA = .04. The second-order factor loadings were .98 and .67 \((p < .001)\), suggesting that the two congruence subdomains can be considered as factors of a broader congruence domain.

In the third model, we allowed all 12 items to load on a single latent variable to test the possibility of a unidimensional scale, rather than a 2-factor scale. The statistics for this model were, \(\chi^2 = 425.57, df = 47, p < .001, \chi^2/df = 9.06\), GFI = .94, TLI = .90, CFI = .93, and RMSEA = .09, indicating a poorer fit. These results supported a 2-factor model over a 1-factor model.

**Phase 4: Construct Validity**

The aim of this phase was to evaluate the initial construct validity of the scale by correlating scores from the Adolescent-Parent Career Congruence Scale with scores from measures of parental support, living-up-to parental expectations on academic achievement, and life satisfaction. Parental support was expected to be positively associated with the adolescent-parent congruence construct, as parents typically strive to meet the needs of their children and share similar fundamental characteristics and values (Bryant et al., 2006; Whiston & Keller, 2004). Living-up-to parental expectations, which reflects the discrepancies between perceived parental expectations and actual self performance in academic and career domains (Wang & Heppner, 2002), was expected
to be positively associated with perceptions of adolescent-parent career congruence as this appraisal is relevant to the congruence between adolescent and parent aspirations, needs, ability, and performance. Finally, we expected adolescent-parent career congruence to be positively associated with life satisfaction, as fitting in with parents should result in positive affect for the adolescents (Oishi & Sullivan, 2005).

Participants

The assessment of construct validity was conducted using the second sample of students, although three cases were deleted as these students did not complete all scales. This left 509 students in the sample for Phase 4.

Materials

Adolescent-parent career congruence. The 12-item Adolescent-Parent Career Congruence Scale was used to assess adolescent-parent career congruence. The internal reliability coefficients of the complementary congruence and supplementary congruence subscales and full scale with this sample were .83, .80, and .87, respectively.

Parental support. The 7-item Parental Influence Subscale from the Career Influence Inventory (Fisher & Stafford, 1999), which was designed for use with high school students, was used to measure parental support. A sample item was, “My parents make me feel that I can succeed in school”. The adolescents were asked to rate each statement on a 6-point Likert-type scale, which ranged from 1 (strongly disagree) to 6 (strongly agree). The internal reliability coefficient for the full scale has ranged from .87 to .89 (Fisher & Stafford, 1999; Rogers & Creed, 2011; Rogers, Creed, & Glendon, 2008). Fisher and Stafford (1999) reported an internal reliability coefficient of .91 for the Parental Influence Subscale. Associations between the full scale and self-efficacy, outcome expectations, goals, planning, and exploration supported concurrent validity (Rogers & Creed, 2011; Rogers et al., 2008). The internal reliability of the 7-item subscale with this sample was .85.
**Living-up-to parental expectations.** The Academic Achievement Subscale of the Living-up-to Parental Expectations Inventory (Wang & Heppner, 2002) was used to measure perceptions of whether adolescents thought they were living-up to parental expectations in the academic and career domains. This subscale contains two sets of 9 questions. Students respond to both sets of questions, which tap their perceived parents’ expectations, and their perceived performance in meeting these expectations. Individual discrepancy scores are calculated by subtracting the parent scores from self scores. These scores are then summed to provide a measure of living-up-to expectations, with higher scores indicating higher levels of congruence (Wang & Heppner, 2002). Students were asked (a) how strongly they currently perceived expectations from their parents, for items such as, “My parents expect me to study hard to get a high-paying job in the future”, and asked (b) to what extent they perform in this area. Responses to both sets of questions were indicated on a 6-point Likert-type scale that ranged from 1 (not at all expected/not doing well) to 6 (very strongly expected/doing very well). Wang and Heppner (2002) reported an internal reliability coefficient of .83 and .84 in two samples of Taiwanese undergraduate students. This subscale was negatively correlated with the State-Trait Anxiety Inventory - Chinese version and the Beck Depression Inventory - Chinese version (Wang & Heppner). Recent research reported a reliability coefficient of .83 for this subscale (S. A. Leung, personal communication, July 27, 2011). The internal reliability for the present sample was .84.

**Life satisfaction.** We used the 5-item Satisfaction with Life Scale (Diener, Emmons, Larson, & Griffin, 1985) to assess life satisfaction. Students responded to questions such as, “In most ways, my life is close to my ideal”, on a 6-point Likert-type scale, which ranged from 1 (strongly agree) to 6 (strongly disagree). This scale has been found to have excellent applicability to research with adolescents (e.g., Lent, Taveira, Sheu, & Singley, 2009; Lent et al., 2005). Cronbach’s alpha for the scale has
ranged from .81 to .91 (Heller, Komar, & Lee, 2007; Lent et al., 2009). It has been shown to be conceptually related to constructs such as happiness, self-esteem, and optimism (e.g., Compton, Smith, Cornish, & Qualls, 1996), and has demonstrated positive correlations with goal progress (Oishi & Diener, 2001) and extraversion (Heller, Watson, & Ilies, 2006), and negative a correlation with neuroticism (Heller et al., 2006). The internal reliability for the present sample was .73.

Results

All correlations were statistically significant and in the expected directions, as reported in Table 3.2. The Adolescent-Parent Career Congruence Scale total score was moderately associated with parental support, living-up-to parental expectations, and life satisfaction (range = .24 to .58), and each subscale also showed moderate associations with the same scales (range = .14 to .58). These associations support construct validity, with students who perceived higher congruence with their parents’ values and goals also reporting more parental support, perceiving that they were consistent with what their parents were expecting of them, and being more satisfied with their life.

In more detail, the moderate correlations between the adolescent-parent career congruence subscales and the parental support measure (complementary congruence = .58; supplementary congruence = .42) demonstrated that, while the adolescent-parent career congruence scales share common variance with parental support, the new scales reflect different constructs.

There was a weaker correlation between the Adolescent-Parent Career Congruence Scale and the Living-up-to-Parental Expectation Inventory \( r = .24, p < .01 \), showing that those scales measure related but different types of congruence. The Living-up-to-Parental Expectation Inventory was created using Chinese adolescents and based on Chinese cultural values (Wang & Heppner, 2002), which are characterized by an unequal relationship between adolescents and parents and culturally-specific norms.
Table 3.2

Summary Data, Bivariate Correlations, and Cronbach’s Alpha Coefficients for the Adolescent-Parent Career Congruence Scale, Parental Support Scale, Living-Up-to Parental Expectations Scale, and the Life Satisfaction Scale; N = 509

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>α</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Full scale: Adolescent-Parent Career Congruence Scale</td>
<td>54.41</td>
<td>7.91</td>
<td>24-72</td>
<td>.87</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Subscale 1 (Complementary Congruence)</td>
<td>33.19</td>
<td>4.80</td>
<td>14-42</td>
<td>.83</td>
<td>.90</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Subscale 2 (Supplementary Congruence)</td>
<td>21.22</td>
<td>4.18</td>
<td>8-30</td>
<td>.80</td>
<td>.86</td>
<td>.55</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Parental Influence Subscale</td>
<td>35.37</td>
<td>3.86</td>
<td>21-42</td>
<td>.85</td>
<td>.58</td>
<td>.58</td>
<td>.42</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Living-up-to Parental Expectations - Academic Achievement</td>
<td>-7.86</td>
<td>6.05</td>
<td>-29-36</td>
<td>.84</td>
<td>.24</td>
<td>.27</td>
<td>.14</td>
<td>.15</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6. Life Satisfaction Scale</td>
<td>19.82</td>
<td>3.70</td>
<td>8-30</td>
<td>.73</td>
<td>.36</td>
<td>.27</td>
<td>.36</td>
<td>.28</td>
<td>.22</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. All correlations significant at p < .01
The scale reflects the idea that adolescent would be optimally congruent with their parents when they live-up-to parental expectations; that is, perform at (norm-based) levels to meet their parents’ (norm-based) expectations (e.g., “My parents expect me to perform better than others academically;” “My parents expect me to have excellent academic performance;” “My parents expect me to pursue their ideal careers”).

By contrast, and although developed and tested in an interdependent cultural context (i.e., Indonesia), the Adolescent-Parent Career Congruence Scale items were derived from the concept of parents as partners or allies for the adolescents regarding their career development (cf. Otto, 2000). For example, complementary congruence items are based on mutual relationship and agreement between adolescents and parents (e.g., “My parents approve of the plans I am making for my future career” and “The progress I have made towards my career goals makes my parents happy”), and the supplementary congruence items were based on the idea of similar or corresponding characteristics shared by adolescents and their parents (e.g., “My parents and I have the same way of defining career success” and “The career plans I have for myself are similar to the plans that my parents have for me”). Additionally, some of the items from the Living-up-to Parental Expectation Scale reflect a long-term orientation (e.g., “My parents expect me to share the financial burden of the family”), that might be too far in the future for high school students to contemplate.

The correlation between the Adolescent-Parent Career Congruence Scale and the life satisfaction measure ($r = .36, p < .01$) demonstrated that when participants had a higher level of career congruence with their parents, they were more likely to be satisfied with their lives, as expected.

**Discussion**

This study was designed to devise a reliable and valid instrument to assess adolescent-parent congruence in the career domain. Congruence was defined as the
perceived *compatibility* (adolescents perceive parents as meeting career exploration, planning, and goal setting needs, and perceive parents to be satisfied with their career progress), and *similarity* between adolescents and their parents (adolescent perceives that parents possess similar or matching beliefs regarding career interests, values, plans, and goals). The results of the study show that the newly developed 12-item Adolescent-Parent Career Congruence Scale can be used to assess two aspects of congruence, namely complementary congruence and supplementary congruence. Each subscale has sound internal consistency and promising initial validity. The Cronbach’s alpha coefficients for the subscales were .83 (complementary congruence) and .80 (supplementary congruence), indicating sound internal reliability for the scale. The moderate inter-correlation between the subscales suggests that they are independent of one another, yet, have overlap in relation to perceived congruence. This overlap was supported by the testing of the factor structure and by the Cronbach’s alpha coefficient for all 12 items of .87.

Content validity was demonstrated via the item development procedures, use of focus groups, and the use of experts as reviewers to assess the content of the scale items. Construct validity was supported by demonstrating factorial independence, initially with an exploratory factor analysis using the first half of a random split of the full sample, and then with a confirmatory factor analysis and second-order factor analysis using the second half of the sample. Further evidence for construct validity was provided by the significant associations between the Adolescent-Parent Career Congruence Scale and measures of parental support, living-up-to parental expectations, and life satisfaction.

Measuring adolescent-parent career congruence is particularly important as many studies have shown an association between correspondence with parents and positive outcomes for their children (Duffy & Dik, 2009; Phillips et al., 2001). An
adequate measure of this construct will allow researchers to assess correspondence between adolescent and parents in the career domain. This will be helpful when designing research studies, and provide a boost for research in this area, which has been hindered by the lack of an adequate scale. At 12 items (7-item for complementary congruence, and 5-item for supplementary congruence), the Adolescent-Parent Career Congruence Scale will be practical and convenient to use with other measures in future research. The scale will be useful to career counsellors who work with young people on their career development issues, and useful to those who design interventions to assist adolescents to optimize their career development.

Having the capacity to assess two subdomains of adolescent-parent career congruence will be an additional benefit for researchers and practitioners who want to assess adolescent-parent career congruence. The complementary congruence subscale will provide an assessment of how well the adolescent perceives his/her needs to be met by parents in the career domain and, reciprocally, perceptions of how satisfied the parents are with the adolescent’s career progress; and the supplementary congruence subscale will reflect perceptions of similarity in beliefs and orientation between the adolescent and the parents.

Limitations of this study offer some prospects for future research. First, we developed the scale with Indonesian high school students. Despite there being differences in individualism and collectivism at the community level between Eastern and Western cultures that will affect and influence the degree of congruence between parents and their adolescent children, there will be different degrees of individualism and collectivism at the family and the individual level (Triandis, 1989). These family and individual differences operate as important influences affecting behaviour in all domains, including the career domain, and warrant testing. The Adolescent-Parent Career Congruence Scale, thus, has applicability in Western as well as Eastern cultures,
and needs to be tested on other, more diverse, populations to confirm the findings of the present study.

Regarding validity evidence, there were moderate correlations between the Adolescent-Parent Career Congruence subscales and life satisfaction. This is consistent with the idea that fitting in with parents leads to positive feelings, which might occur in both Eastern and Western cultures (Oishi & Sullivan, 2005). Individuals from an interdependent culture seek to fit in, to stress conformity, and to develop a sense of connection, especially with significant others, and in particular, their parents. In this context, their well-being will depend, in part, on how well they achieve this relational cultural task (Oishi & Diener, 2001; Uchida, Kitayama, Mesquita, Reyes, & Morling, 2008). In independent cultural contexts, adolescent satisfaction might depend more on how well they seek to affirm positive internal attributes of the self, rather than please others (Uchida et al., 2008); however, this affirmation of the self also relies on the relationships developed and maintained with parents (Oishi & Sullivan, 2005). Thus, when testing the validity of the Adolescent-Parent Career Congruence Scale across cultures, these differing cultural influences could be tested.

Second, we investigated content validity and construct validity in this study. Further research could focus on establishing the predictive validity of the Adolescent-Parent Career Congruence Scale; for example, by testing the associations between students’ career congruence with their parents and career-related outcomes. Finally, the present research supports the feasibility of developing an adolescent-parent career congruence scale. Given that academic achievement is closely related to career development, and considered to be important for adolescents, it may prompt interested researchers to develop a similar scale for the academic domain.
EFFECTS OF PARENTAL CONTEXTUAL INFLUENCES

CHAPTER 4

Chapter 4 presents the second study, which tested the cross-sectional relationships between parental career expectations and adolescent-parent career congruence and career aspirations and the career actions of planning and exploration in adolescents from a collectivist society. The study was informed by the social cognitive career choice model. In the model, the term career aspirations was used to connote career goals, and the terms career planning and career exploration were used to connote career actions. Additionally, parental career expectations and adolescent-parent career congruence were examined as the proximal contextual variables. The participants of this study were 351 Grade 10 Indonesian high school students, and the Adolescent-Parent Career Congruence Scale developed in Study 1 was used to measure congruence with parents regarding career matters.

Study 2 has been published online in the *International Journal for Educational and Vocational Guidance*. The related confirmation of online publication of the article is included in Appendix J. In this chapter, minor adjustments have been made to the online publication version by modifying the numbering of tables and figures to match Chapter 4, and by including the list of references for Study 2 in the reference section at the end of this thesis.

An abstract based on Study 2 was also accepted for a poster presentation at the *13th European Congress of Psychology* to be held in Stockholm, Sweden from 9-12 July 2013. The related confirmation of acceptance is included in Appendix K.
PARENTAL INFLUENCES AND ADOLESCENT CAREER BEHAVIOURS IN A COLLECTIVIST CULTURAL SETTING

Abstract

Using social cognitive career theory, we examined the relationships between parental variables (parental career expectations, adolescent-parent career congruence) and adolescent career aspirations and career actions (planning, exploration) in a sample of Grade 10 Indonesian high school students. We found good support for a model that revealed various routes by which the two parental variables were associated with adolescent career aspirations and career actions, although the main influence of the parental variables was by way of self-efficacy. The findings demonstrate important roles for parental career expectations and adolescent-parent career congruence in adolescents’ career aspirations and actions.

Résumé. Les influences parentales et les comportements professionnels des adolescents dans un cadre culturel collectiviste. En utilisant la théorie sociale cognitive de l’orientation, nous avons examiné les relations entre les variables parentales (attentes professionnelles des parents, la congruence professionnelle adolescent-parent), les aspirations professionnelles des adolescents et les actions professionnelles (planification, exploration) auprès d’un échantillon d’élèves de 10e année d’école secondaire en Indonésie. Nous avons trouvé de bons appuis pour un modèle qui a révélé différentes voies par lesquelles les deux variables parentales étaient associées avec les aspirations professionnelles des adolescents et les actions professionnelles, bien que l’influence principale des variables parentales soit celle du sentiment d’auto-eficacité. Les résultats montrent un rôle important des attentes professionnelles des parents et de la congruence professionnelle adolescent-parent sur les aspirations et les actions professionnelles des adolescents.

Resumen. Las influencias parentales y comportamientos adolescentes de carrera en un entorno cultural colectivista. Usando la teoría social cognitiva carrera, se examinaron las relaciones entre las variables de los padres (parental expectativas de carrera, congruencia carrera adolescentes y padres) y las aspiraciones de carrera adolescentes y acciones profesionales (planificación, exploración) en una muestra de 108 grado en estudiantes de secundaria de Indonesia. Hemos encontrado un buen soporte para un modelo que diversas rutas reveladas por el cual las dos variables parentales eran asociado con aspiraciones profesionales adolescentes y acciones de carrera, aunque la principal influencia de las variables parentales era por medio de autoeficacia. Los resultados demuestran un papel importante para los padres expectativas de carrera y congruencia carrera adolescentes y los padres en aspiraciones y acciones de carrera adolescentes.

Keywords: parental career expectations; adolescent-parent career congruence; career aspirations; career actions
There is considerable research demonstrating that the family is an important influence on the career development of their adolescent children. Parents, especially, play a central role in cultivating their children’s career aspirations and fostering exploration around their educational and career pathways (Young et al., 2006). This role for parents is evident cross-culturally, with parents from both collectivist and non-collectivist countries having a significant effect on the career development of their children (Dietrich & Kracke, 2009; Garcia, Restubog, Toledano, Tolentino, & Rafferti, 2012). However, with few exceptions (e.g., Leung, Hou, Gati, & Li, 2011), there has been little research conducted in collectivist countries, where in-group reliance and inter-dependence are the norm (Kitayama & Uchida, 2005). Although career researchers have begun to highlight parental expectations and congruence between adolescents and their parents as important considerations in the career development of adolescents from collectivist societies (e.g., Leung et al., 2011; Ma & Yeh, 2005; Wang & Heppner, 2002), no studies have examined the outcomes of these important variables from a theoretical perspective. The goal of the current study was to test the effects of two aspects of the proximal parental contextual influence, that of adolescents’ perceived parental career expectations and congruence with parents regarding career matters, using the social cognitive career theory framework (SCCT; Lent, Brown, & Hackett, 1994). Our outcome variables of interest were adolescents’ career aspirations and the career actions of planning and exploration.

**Family and Parental Influences on Career Development**

Both general family processes and career-specific parental behaviours can have an influence on adolescent career development. First, family process variables, such as parental expectations and encouragement, have been shown to have an effect on children’s career development over and above that of family structural variables, such as socio-economic level and the number of children in the family (Whiston & Keller,
Specific examples of process variables include the family’s emotional climate, which has been shown to be related to career planning, vocational identity, and career decision-making self-efficacy (Hargrove, Creagh, & Burgess, 2002; Hargrove, Inman, & Crane, 2005). Family support also has been found to be associated with career search self-efficacy and decision-making (Nota, Ferrari, Solberg, & Soresi, 2007). Second, career-specific parental behaviours were found to be related to adolescents’ career development (Dietrich & Kracke, 2009). For example, parental career support has been recognised as an important factor in enhancing career confidence and planning (Perry, Liu, & Pabian, 2010). Parental feedback on career aspirations also has been shown to be associated with a range of potential actions considered to achieve those goals (Young et al., 2006).

**Parental Influences and Adolescent Career Development in Collectivist Cultures**

Family influences are especially underlined in collectivist countries (Oettingen & Zosuls, 2006). In these cultural contexts, the private and collective selves are not inherently separate (Leong, Hardin, & Gupta, 2011). Cognitive schemas are constructed in reference to the expectations, opinions, and evaluations of significant others, particularly parents, as well as to the individual’s own desires and needs (Kitayama & Uchida, 2005). Additionally, in cultures where there is a large power distance (i.e., the extent to which the less powerful members of institutions, in this case the family, expect and accept the exertion of power from the more powerful members; Hofstede & Hofstede, 2005), evaluations made by in-group members (parents being first and foremost for children) are heavily weighted and often given priority when actions are contemplated. In this context, parents are looked up to as important role models and facilitators, as they have a strong influence on their children. They command respect, and have considerable influence on their children’s sense of self-efficacy and on the decisions made by their children (Oettingen & Zosuls, 2006).
Although every individual has both collectivist and individualist propensities in their cognitive systems, the proportions are different. Individuals who have grown up in collectivist cultures have a stronger tendency to act in a collectivistic manner and a weaker tendency to perform individualistic behaviours, whereas those raised in individualist contexts tend to have the opposite set of tendencies. When facing a situation, the former individuals have a tendency to respond from a collectivist perspective, whereas the latter will respond using an individualist orientation. Consequently, social behaviour is not the same across cultures (Triandis, 1995).

For example, when a person growing up in collectivist contexts makes a career decision that has the goal of making significant others (e.g., parents) satisfied, it is likely that the decision will please the individual as well (Leong et al., 2011). Thus, disregarding the wishes of one’s parents when implementing career actions is a contradiction of the individual’s sense of self (Hardin, Leong, & Osipow, 2001). This can be contrasted with what occurs in individualist societies, where intense motivation to gratify one’s parents when making important decisions might imply a dysfunctional dependence on parental endorsement (Schneider, 1998). Adolescents from these societies might be aware of the expectations of significant others, but they would not think it “quite right” to give primacy to influences outside of themselves when deciding what to do, as the individual self-reference is more influential in regulating actions (Kitayama & Uchida, 2005).

**Parental Career Expectations and Adolescent-Parent Career Congruence**

Several qualitative studies have examined the relationship between parental career expectations and specific career behaviours in children from collectivist cultures (e.g., Fouad et al., 2008; Shea, Ma, & Yeh, 2007). These studies suggest that parental career expectations, values, and support, together with perceived obligations to the family, are dominant themes in the adolescent career development process, especially
around developing career aspirations, interests, and values. Further, children from collectivist cultural backgrounds also perceive their parents’ academic and career-related expectations to be specific. Children usually have a clear understanding as to the level of education they need to reach, the career they should select, and the level of occupational success they should achieve (Fouad et al., 2008). Compared to their individualist counterparts, adolescents from these cultures perceive more direct parental influence on their career aspirations and options, and thus, have to adjust their own career interests to meet their parents’ approval (Leong & Serafica, 1995). At the same time, the adolescents themselves perceive parental influence and control as legitimate, and do not have expectations that their education and career-related decisions will be theirs alone to make (Bernardo, 2010; Hardin et al., 2001).

Whilst parental expectations are often reported as significant contributors to positive career-related outcomes (e.g., Fouad et al., 2008), how well children meet these expectations is an important consideration. Adolescents who felt that they could meet parental expectations in the career and academic areas demonstrated a greater capacity to cope with career-related problems (Leung et al., 2011), whereas those who felt that they could not live up to parental expectations were more at risk of experiencing psychological distress (Wang & Heppner, 2002). These studies demonstrated that to be congruent with parental expectations is beneficial as it affects both career development and well-being.

Further, adolescents from collectivist cultures also anticipate reciprocities within the relationships with significant others (i.e., their parents; Kitayama & Uchida, 2005). Thus, on the one hand, it is important for adolescents who have grown up in collectivist cultures to perceive that they are capable of adjusting their career goals and actions to what is acceptable to their parents. On the other hand, it is important to perceive that their parents’ actions and/or reactions fit with their own expectations and needs. For
example, while recent studies have demonstrated the importance of parental support in fostering adolescents’ career aspirations, planning (Ma & Yeh, 2010), and exploration (Cheung & Arnold, 2010), other research has shown that the effect of parental support on adolescents’ career development is conditional on the adolescents perceiving their parents’ actions as supportive (Garcia et al., 2012). This suggests that the anticipated consequence of parental actions will be met only if the intended inputs are similarly construed by the parents and their children. Thus, being congruent with parents concerning career matters captures adolescent perceptions that parents have corresponding career values, interests, aspirations, and plans (supplementary congruence). It also captures adolescent perceptions that parents are facilitative in their career progress at the level required and are happy or satisfied with their career-related actions and progress (complementary congruence).

In sum, parental career expectations and congruence with parents regarding career matters (i.e., perceiving to be in line with parental wishes, being supported by parents, and being able to make parents satisfied) have the potential for explaining adolescents’ career development in a collectivist society. Our study was designed to test the associations between these parental variables and adolescents’ career aspirations and the career actions of planning and exploration.

**Career Aspirations and the Career Actions of Planning and Exploration**

Career aspirations are important to study as they are forerunners to future career choices and attainment (Schoon & Polek, 2011). Career aspirations are “an individual’s expressed career-related goals or choices” (Rojewski, 2005, p.132), and in this study, were operationalised as the individual’s career goals that capture the domains of leadership roles, ambition to manage and to train others, and interest in advance education (O’Brien, 1996).
Career planning and exploration are crucial to examine as they are essential actions required to realise one’s career aspirations (Rogers, Creed, & Glendon, 2008). Career planning involves activities associated with managing existing information about future course of action, and includes setting short-term goals, timelines, and strategies that will facilitate career progress. Career planning is an ongoing activity, although it becomes especially salient during times of crisis or when there is a career transition (Zikic & Klehe, 2006). Whilst career planning involves thinking about and preparing for an occupational future, career exploration captures the gathering of information relevant to career progress (Blustein, 1997; Stumpf, Colarelli, & Hartman, 1983). As a lifelong process, career exploration allows individuals to manage better any challenges associated with a transition (Blustein, 1997; Savickas, 1997). Self-exploration involves the exploration of the individual’s own interests, values, and experiences in order to obtain a more comprehensive understanding of themselves. Environmental exploration focuses on the individual’s investigation of various career choices and involves gathering relevant information that allows more well-informed career decisions (Zikic & Klehe, 2006).

The Social-Cognitive Career Theory Perspective

SCCT (Lent et al., 1994) proposes that self-efficacy (beliefs about one’s ability to effectively organise and perform courses of action), outcome expectations (contingency beliefs that one’s efforts will result in desired consequences), and goals (or aspirations), are three key variables for career agency. These variables operate together with person, contextual, and learning variables (e.g., gender, parental involvement, and skill development opportunities) to motivate career actions, such as career planning and exploration.

Further, each individual is affected by influences from the environment that are perceived to be significant in the pursuit of goals (Lent, Brown, & Hackett, 2000).
SCCT (Lent et al., 1994) divides these contextual influences into two categories: distal influences (e.g., gender-role stereotypes) that provide individuals with learning opportunities and resources that foster self-efficacy, outcome expectations, and interests; and proximal influences (e.g., career barriers) that affect individuals during the active stages of career decision-making (Lent et al., 2000).

While SCCT (Lent et al., 1994) proposes that proximal contextual variables directly influence the individual’s career goals and career actions, Bandura’s (1999, 2000) general social cognitive theory holds that these variables affect career goals directly and indirectly by way of self-efficacy, and influence career actions only indirectly by way of self-efficacy and goals. Several studies in individualist contexts (i.e., Western countries) have compared these two approaches (e.g., Lent et al., 2001; Lent, et al., 2003) and also have integrated them (e.g., Lent et al., 2005). Most of these studies demonstrated support for the indirect relationships between proximal contextual influences and goals (e.g., Lent et al., 2001; Lent et al., 2005) and actions (e.g., Lent et al., 2003). Consistent with Lent et al.’s (2000) approach that the career choices of individuals in collectivist cultures may be directly influenced by significant others, one study with participants from a collectivist cultural background showed that parental involvement had a strong direct effect on individuals’ career choice (Tang, Fouad, & Smith, 1999). To obtain a fuller picture about adolescents’ career behaviours in a collectivist society, we test both approaches in the current study.

We employed the SCCT (Lent et al., 1994) as a framework, as it highlights both dynamic individual processes and context-specific influences when providing a schema to explain how individuals are able to develop, change, and regulate their behaviour (cf. Lent et al., 1994). The theory has been widely used to explain career activities (e.g., Rogers & Creed, 2011; Rogers et al. 2008) and subject selection, such as mathematics, science, and engineering (e.g., Lent et al., 2001; Lent et al., 2003). Of particular value,
is the theory’s capacity to incorporate contextual influences. As cross-cultural applicability has been demonstrated for the theory (e.g., Garcia et al., 2012; Rogers et al., 2008; Tang et al., 1999), examining the relationships between parental influences and career outcomes in a collectivist cultural context was expected to enrich the utility of the model.

The Current Study

Research on career development in collectivist cultures is very limited (Lent et al., 2003), and our study adds to the understanding of the parental influences on career progress in this context. We examined the relationships between parental variables and adolescents’ career aspirations and actions in a collectivist society. Having SCCT (Lent et al., 1994) as a framework, we used career aspirations to represent career goals, and career planning and exploration to reflect career actions, as these variables were suitable for high school students.

Based on the SCCT basic hypotheses (Lent et al., 1994), we expected that (a) self-efficacy would be associated positively with outcome expectations, career aspirations, planning, and exploration; (b) outcome expectations would be associated positively with career aspirations, planning, and exploration; and (c) career aspirations would be associated positively with career planning and exploration. Further, we considered parental career expectations and adolescent-parent career congruence as proximal contextual variables. When developing the hypotheses regarding the ways by which these variables related to career aspirations and actions, we integrated Bandura’s (1999, 2000) and Lent et al.’s (1994) approaches. Therefore, we expected that (d) both parental influences would be associated positively with career aspirations directly and indirectly by way of self-efficacy; and (e) both parental variables would be correlated positively with the career actions of planning and exploration directly and indirectly by way of self-efficacy and career aspirations. See Figure 4.1.
Figure 4.1. Basic SCCT model (full lines); model depicting hypothesised relationships between parental career expectations and adolescent-parent career congruence and career aspirations and the career actions of planning and exploration (dashed lines).

We tested our hypotheses using a sample of Grade 10 Indonesian high school students. As Indonesia is rated high on the dimensions of collectivism and power distance (Hofstede & Hofstede, 2005), we anticipated that parental career expectations and career congruence with parents would be especially salient variables to consider. These students must choose a major at the end of their Grade 10 year. As this major commits them to particular studies in Grades 11 and 12, the last quarter of grade 10 is a period during which they discuss possible majors, educational paths, and future careers with significant others, especially parents. It is a time for them to cement career goals, explore education and career-related options, plan their futures, and manage relevant resources. As these students have grown up in a collectivist context, and were at the active stage of career decision making, the sample was appropriate for the study.
Method

Participants

Participants were 351 Grade 10 students (53.3% girls, mean age 15.93 years, SD = .51), enrolled in a high school in Central Java, Indonesia. When asked to indicate their typical grades in school, five students (2.3%) reported “low achievement,” 147 (41.9%) “average,” 196 (55.8%) “above average,” and three students (.9%) indicated “well above average” results. Most students (310; 88.3%) reported that in Year 11 they wanted to select the Natural Sciences major, 38 students (10.8%) intended to select Social Sciences, and three students (0.9%) planned to choose the Languages stream. A small number of students (12%) reported current or previous paid part-time work while at school; this low level is common for Indonesian high school students.

Materials

Parental Career Expectations. The 9-item Perceived Parental Expectation Subscale (Academic Achievement Domain) from the Living up to Parental Expectations Scale (Wang & Heppner, 2002) assesses students’ perceptions of parental expectations related to their career choice and academic performance. Students responded to items such as, “Parents expect you to study hard to get high-paying job in the future, how strong do you perceive this from your parents?” on a 6-point Likert-type scale (1 = not at all expected and 6 = very strongly expected). Higher scores indicate higher levels of perceived parental career expectations. Internal reliability coefficients of more than .80 and moderate level test-retest reliability over a 4-week period have been reported for the subscale (Leung et al., 2011; Wang & Heppner, 2002). Wang and Heppner (2002) reported construct validity based on factor analysis, and showed criterion and predictive validity based on relationship with related variables. Alpha for the current sample was .78.
Adolescent-Parent Career Congruence. The 12-item Adolescent-Parent Career Congruence Scale (Sawitri, Creed, & Zimmer-Gembeck, 2013) contains seven items that tap the complementary congruence domain (i.e., adolescent perceptions that parents are helpful in progressing their career goals, and that parents are happy or satisfied with their career direction and progress), and five items that tap the supplementary congruence domain (i.e., adolescent perceptions that parents possess matching ideas regarding career interests, values, plans, and goals). Students responded to statements such as, “My parents want the same career for me as I want for myself” on a 6-point scale (1 = strongly disagree and 6 = strongly agree). Higher total scores reflect a higher degree of perceived congruence with parents regarding career matters. Sawitri et al. (2013) reported an internal reliability coefficient of .87, and provided support for construct validity by identifying positive correlations with parental support, living-up-to parental expectations, and life satisfaction. Alpha was .88.

Career Self-Efficacy. The 12-item Career Decision Making Self-Efficacy Subscale from the Middle School Self-Efficacy Scale (Fouad, Smith, & Enoch, 1997) measures students’ level of career decision-making self-efficacy. On a 6-point scale (1 = not confident at all and 6 = highly confident), students responded to items such as, “How confident are you that you can find information in the library about occupations you are interested in?” Higher scores indicate stronger self-efficacy beliefs. Internal reliability coefficients of .89 and .79 have been reported (Creed, Tilbury, Buys, & Crawford, 2011; Fouad et al., 1997). Construct validity has been demonstrated by factor analysis and testing correlations with career variables such as planning and exploration (Creed et al., 2011; Fouad et al., 1997). Alpha was .78.

Career Outcome Expectations. The 6-item Vocational Outcome Expectations Scale (McWhirter, Rasheed, & Crothers, 2000) assesses students’ level of career outcome expectations. Students responded to items such as, “My career planning will
lead to a satisfying career for me,” on a 6-point scale (1 = strongly disagree and 6 = strongly agree). Higher scores indicate stronger career outcome expectations. The authors reported an internal alpha of .83 and a test-retest coefficient of .59 over a 9-week period. Evidence for validity has been demonstrated by positive correlation with Fouad and Smith’s (1996) outcome expectation instrument (McWhirter et al., 2000). Alpha was .79.

**Career Aspirations.** The 10-item Career Aspirations Scale (O’Brien, 1996) measures the domains of leadership aspirations, ambition to train and manage others, and interest in further education. Students responded to items such as, “I hope to become a leader in my career field” on a 6 point scale (1 = strongly disagree and 6 = strongly agree). Higher total scores are reflective of higher career aspirations. Alphas have been reported as .74 and .84 (O’Brien, 1996; Reynolds & Constantine, 2007). Evidence for validity has been supported by positive correlations with career salience and academic achievement, and by negative correlations with negative affectivity and occupational traditionality (O’Brien, 1996). Alpha was .71.

**Career Planning.** The 8-item Career Thinking and Planning Subscale of the Career Salience Scale (Greenhaus, 1971) assesses the level of career relevant thoughts and planning. Students responded to items such as, “I enjoy thinking about and making plans about my future career” on a 6-point scale (1 = strongly disagree and 6 = strongly agree). Higher scores indicate more involvement in career planning. Alphas have been reported as .74 and .72 (Creed, Fallon, & Hood, 2009; Zikic & Klehe, 2006). Construct validity has been supported by associations with measures of job searching, career exploration (Zikic & Klehe, 2006), career exploration, and self-regulation (Creed et al., 2009). Alpha was .70.

**Career Exploration.** The Career Exploration Survey (Stumpf et al., 1983) assesses the degree to which students were involved in career exploration activities
during the last three months. Students responded to items such as, “In the last three months, I have been focusing my thoughts on myself as a person in relation to my career” (self-exploration domain; 5 items) and “In the last three months, I have been investigating career possibilities” (environmental exploration domain; 6 items) on a 6-point scale (1 = almost never and 6 = very often). Higher total scores indicate higher engagement in career exploration activities during the last three months. Alpha for the scale has been reported as .90 (Hirschi, 2011). Validity evidence has been shown by positive correlation with career planning and negative correlation with career concerns (Creed et al., 2009). Alpha was .81.

Translation Procedure

We followed Brislin’s (1986) recommendations to translate the measures into Bahasa (the Indonesian language). First, the items were translated into Bahasa by two native Indonesian speakers who also spoke English. Second, the readability of the translated version was then checked by two monolingual Indonesian speakers. Third, two native Indonesian speakers who also spoke English blindly back-translated the measures into English. Fourth, the back-translated versions were then compared with the original English version to ensure the accuracy of meaning, and any errors were corrected. Last, three Indonesian high school students checked the final Indonesian version and commented on readability.
the original English version to ensure the accuracy of meaning, and any errors were corrected. Last, three Indonesian high school students checked the final Indonesian version and commented on readability.

**Data Collection Procedure**

Teachers and the first author administered the survey in class time. Three hundred and eighty nine students obtained permission from their parents and agreed to participate in the survey. Three students did not return the informed consent forms and were given an equivalent activity by the class teacher. As 38 students were not able to complete the survey satisfactorily, we obtained 351 usable surveys. The study had approval from the authors’ university ethics committee. Both parent and student consent were also obtained. The data reported in this study constitute one part of a larger study, which is tracking the career development of children in Indonesia (see Sawitri et al., 2013).

**Statistical Analysis**

**Data Management for Model Testing.** To achieve a ratio of 10:1 for sample size to parameters estimated in the latent variable analysis (Kline, 2011), we created item parcels to represent all scales (Landis, Beal, & Tesluck, 2000). We used an item-to-construct balance procedure to create three parcels for each latent variable (Hau & Marsh, 2004). Using exploratory factor analysis, we specified a single-factor model for each scale. We then created parcels by using the three items with the highest loadings to anchor the three parcels, adding the next three items to the parcels in a reverse order, and continuing until all items were allocated (Little, Cunningham, Shahar, & Widaman, 2002).

**Steps in Model Testing.** We (a) assessed a measurement model to ensure that all latent variables (parental career expectations, adolescent-parent career congruence, self-efficacy, outcome expectations, career aspirations, career planning, and career
exploration) were represented adequately by their parcels; and (b) assessed the hypothesised structural model. All analyses were conducted in AMOS using maximum likelihood estimation. Model fit was assessed using $\chi^2$, Goodness of Fit (GFI), the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). With 351 participants and 21 observed variables, a significant $\chi^2$, GFI values more than .90, CFI and TLI values more than .92, and RMSEA less than .07 indicate an acceptable fit. As $\chi^2$ is sensitive to sample size, we also examined $\chi^2/df$, with values less than 3 indicating an acceptable fit (Hair, Black, Babin, & Anderson, 2010).

**Results**

**Structural Model Testing**

The fit statistics for the measurement model were good, $\chi^2(168, N = 351) = 286.41, p < .001, \chi^2/df = 1.71, CFI = .96, GFI = .93, TLI = .95, RMSEA = .05$. Factor loadings ranged from .49 to .89. Table 4.1 reports summary data, zero-order correlations, and correlations among the latent variables.

We did not include age, gender, school achievement, major, or work experience in the structural model, as these variables had weak correlations with career aspirations, planning, and exploration ($r = .01$ to $.12$). The structural model demonstrated good fit statistics, $\chi^2(169, N = 351) = 276.60, p < .001, \chi^2/df = 1.64, CFI = .96, GFI = .93, TLI = .96, RMSEA = .04$. In this model, there were several non-significant, direct pathways: (a) parental expectations to planning; (b) congruence to aspirations, planning, and exploration; (c) self-efficacy to aspirations and planning; (d) outcome expectations to exploration; and (e) aspirations to exploration. The model accounted for 42% of the variance in self-efficacy, 52.1% in outcome expectations, 32.5% in aspirations, 50.5% in planning, and 31.4% in exploration. The total standardised effects for parental career expectations were .20 (on self-efficacy), .14 (outcome expectations), .27 (aspirations),
11 (planning), and .23 (exploration). For adolescent-parent career congruence, the effects were .56 (self-efficacy), .40 (outcome expectations), .31 (aspirations), .38 (planning), and .34 (exploration). See Figure 4.2.

Additionally, we tested the mediation pathways in the final model by following the recommendations of Shrout and Bolger (2002). First, we tested a structural model that contained the direct effects only, and then tested a model that contained both the direct and indirect effects. Finally, we estimated standard errors and 95% bias-corrected confidence intervals using the AMOS bootstrapping technique. Mediation can be inferred when the predictor and the outcome are significantly correlated, the mediator is correlated with the predictor and the outcome variable, and the 95% confidence interval of the indirect effect through the mediator does not include zero. Full mediation occurs when the direct effect is reduced to zero when the mediator is included in the model; partial mediation occurs when the direct effect is reduced significantly when the mediator is included.
Table 4.1

Summary Data, Zero-Order Correlations (Above Diagonal), and Correlations among Latent Variables (Below Diagonal); N = 351

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parental career expectations</td>
<td>47.01</td>
<td>4.62</td>
<td>.22**</td>
<td>.25**</td>
<td>.22**</td>
<td>.25**</td>
<td>.20**</td>
<td>.26**</td>
<td></td>
</tr>
<tr>
<td>2. Adolescent-parent congruence</td>
<td>53.15</td>
<td>8.05</td>
<td>.31***</td>
<td>-.50**</td>
<td>.42**</td>
<td>.31**</td>
<td>.35**</td>
<td>.35**</td>
<td></td>
</tr>
<tr>
<td>3. Self-efficacy</td>
<td>54.71</td>
<td>6.03</td>
<td>.37***</td>
<td>.61***</td>
<td>-</td>
<td>.57**</td>
<td>.35**</td>
<td>.38**</td>
<td>.42**</td>
</tr>
<tr>
<td>4. Outcome expectations</td>
<td>28.86</td>
<td>3.37</td>
<td>.29***</td>
<td>.50***</td>
<td>.71***</td>
<td>-</td>
<td>.35**</td>
<td>.46**</td>
<td>.33**</td>
</tr>
<tr>
<td>5. Career aspirations</td>
<td>46.47</td>
<td>5.36</td>
<td>.39***</td>
<td>.41***</td>
<td>.50***</td>
<td>.50**</td>
<td>-</td>
<td>.46**</td>
<td>.27**</td>
</tr>
<tr>
<td>6. Career planning</td>
<td>38.12</td>
<td>4.25</td>
<td>.25***</td>
<td>.44***</td>
<td>.51***</td>
<td>.61***</td>
<td>.64***</td>
<td>-</td>
<td>.43**</td>
</tr>
<tr>
<td>7. Career exploration</td>
<td>42.62</td>
<td>7.19</td>
<td>.34***</td>
<td>.41***</td>
<td>.53***</td>
<td>.39***</td>
<td>.35**</td>
<td>.52***</td>
<td>-</td>
</tr>
</tbody>
</table>

**p < .01 ***p < .001
First, we tested if there was an indirect path from parental career expectations to aspirations (via self-efficacy and outcome expectations). There was a direct effect for parental expectations to aspirations ($\beta = .25, p < .001$), establishing the first criterion for mediation. Using 1,000 bootstrapped samples, we then tested the direct and indirect effects together. Here, parental expectations predicted self-efficacy ($\beta = .20, p < .001$), self-efficacy predicted outcome expectations ($\beta = .72, p < .001$), and outcome expectations predicted aspirations ($\beta = .27, p < .01$), showing all requirements for mediation were met. Parental expectations remained significantly associated with aspirations ($\beta = .20, p < .001$), and as the indirect CI did not contain zero (CIs = .02 to .14), self-efficacy and outcome expectations partially mediated the effect for parental expectations to aspirations. Using the same procedures, we tested the indirect effects for
(a) congruence to aspirations (via self-efficacy and outcome expectations); (b) parental expectations to planning (via self-efficacy, outcome expectations, and aspirations); (c) parental expectations to planning (via self-efficacy and outcome expectations); (d) parental expectations to planning (via aspirations); (e) congruence to planning (via self-efficacy, outcome expectations, and aspirations); (f) congruence to planning (via self-efficacy and outcome expectations); (g) parental expectations to exploration (via self-efficacy); and (h) congruence to exploration (via self-efficacy).

All indirect effects were significant. We found partial mediation effect for (g) parental expectations to exploration (via self-efficacy; CIs = .04 to .17); and full mediation effects for (a) congruence to aspirations (via self-efficacy and outcome expectations; CIs = .09 to .31); (b) parental expectations to planning (via self-efficacy, outcome expectations, and aspirations; CIs = .12 to .33); (c) parental expectations to planning (via self-efficacy and outcome expectations; CIs = .03 to .16); (d) parental expectations to planning (via aspirations; CIs = .03 to .18); (e) congruence to planning (via self-efficacy, outcome expectations, and aspirations; CIs = .19 to .47); (f) congruence to planning (via self-efficacy and outcome expectations; CIs = .13 to .38); and (h) congruence to exploration (via self-efficacy; CIs = .16 to .34).

Discussion

This study tested the relationships between perceived parental influences (parental career expectations and adolescent-parent career congruence) and adolescents’ career aspirations and the career actions of planning and exploration. We employed a sample of adolescents from a collectivist context, used the SCCT framework, and integrated the views of Bandura (1999, 2000) and Lent et al. (1994) in developing the hypotheses. The findings of this study expand the range of correlates of career behaviours in collectivist cultures (e.g., Garcia et al., 2012; Leung et al., 2011; Wang & Heppner, 2002) and extend previous SCCT-based studies carried out in Western
contexts, which have demonstrated various ways by which proximal contextual variables related to career goals and actions (e.g., Lent et al., 2001, Lent et al., 2003; Lent et al., 2005).

This study contributed to the literature in a number of important ways. First, we demonstrated that parental career expectations were associated with adolescents’ career aspirations, directly and indirectly via adolescents’ self-efficacy and outcome expectations. Second, we showed that adolescent-parent career congruence was associated with adolescents’ career aspirations, but indirectly only via self-efficacy and outcome expectations. These findings provide partial support for Lent et al.’s (1994) view and Bandura’s (1999, 2000) approach regarding the relationship between proximal contextual variables and goals. Although most of the earlier SCCT studies in Western contexts demonstrated indirect relationships between proximal contextual variables and goals (e.g., Lent et al., 2001; Lent et al., 2003), our findings suggest two routes by which parental variables relate to adolescents’ career aspirations: first, they (i.e., parental career expectations) have a direct association, and second, they (i.e., parental career expectations and adolescent-parent career congruence) serve as proximal sources of adolescents’ self-efficacy information, which is subsequently translated into career aspirations via the development of outcome expectations. The first result is consistent with Tang et al.’s (1999) study with participants from a collectivist cultural background, in which the parental variable was found to have a direct relationship with career choice. The second finding is in line with Oettingen and Zosul’s (2006) proposition regarding the key roles of parents in shaping collectivist adolescents’ efficacy beliefs.

Adolescent-parent career congruence was more strongly associated with self-efficacy than parental career expectations. This finding indicates that although consideration of parental career expectations is important, being congruent with parents regarding career issues is more influential, and is likely to be the main driver of
boosting adolescents’ confidence in dealing with career tasks. Importantly, self-efficacy served as a mechanism by which parental career expectations and adolescent-parent career congruence exerted most of their effects on career aspirations and the career actions of planning and exploration. These findings support previous study that involves adolescents from a collectivist background, in which high student ratings of parental actions were shown to relate positively to self-efficacy (Garcia et al., 2012).

While studies in a Western context have demonstrated support for the indirect relationships between proximal contextual influences and career actions (e.g., Lent et al., 2003), our findings showed (a) that self-efficacy carried the effects of both parental variables to adolescents’ career exploration; and (b) that parental career expectations also were associated directly with this career action. As the relationship between career aspirations and career exploration was not significant, these adolescents are likely to explore career information based on their perceived parental career expectations, perceived congruence with parents regarding career matters, and confidence in handling career-related task, regardless of their career aspirations. These findings are in line with Lent et al.’s (2000) view and Leong and Serafica’s (1995) opinion that the influence of significant others on individual career choices and behaviour in a collectivist context might be stronger and more direct. They also confirm Shea et al.’s (2007) findings that adolescents from collectivist societies are likely to consider parents’ wishes when taking career-related actions.

We did not find direct associations between the parental variables and career planning. There were, however, significant indirect paths from both parental variables to career planning: first, via self-efficacy, outcome expectations, and career aspirations, and second, via self-efficacy and outcome expectations. In addition, parental career expectations were associated with career planning via career aspirations alone. This suggests that the contributions of both parental variables in fostering adolescents’
capacity to outline their career plans result from parents’ contribution to efficacy development and fostering career aspirations. Accordingly, these results regarding the relationships between the parental variables and the career actions of planning and exploration provide partial support for Lent et al.’s (1994) direct hypothesis. The results also support Bandura’s (1999, 2000) indirect hypotheses, that proximal contextual variables also related to career actions indirectly by way of self-efficacy and goals.

In summary, by being one of the few studies to date to investigate career development in a collectivist cultural context, this study highlighted the key roles that perceived parental career expectations and adolescent-parent career congruence play in the development of adolescent career aspirations and the career actions of planning and exploration. From the SCCT perspective (Lent et al., 1994), this study demonstrated that adolescents are more agentic when they perceive higher levels of parental career expectations and a higher degree of congruence with parents regarding career matters. This study also contributed to our understanding of how interdependent agency works in collectivist cultures, where individual aspirations and actions are constructed in line with significant others’ expectations and behaviours (Kitayama & Uchida, 2005).

Our results suggest that, (a) when assisting adolescents to clarify and/or develop career aspirations, counsellors need to be cognisant of adolescents’ levels of career confidence and outcome expectations. They also need to be aware of adolescents’ perceived parental career expectations and career congruence with their parents; (b) when devising interventions to enhance career confidence in this context, counsellors should explore the adolescents’ perceptions of what their parents expect. In addition, they should explore how these expectations dovetail with the adolescents’ own capacities, and examine how they perceive their parents as meeting their career-related needs; (c) when assisting adolescents struggling with their career progress, it is important for counsellors to explore their self-efficacy, perceived parental career
expectations, and congruence with parents regarding career matters; and (d) when helping adolescents outline their career plans, counsellors primarily need to probe their outcome expectations and career aspirations. Additionally, they need to take into consideration adolescents’ self-efficacy, as well as their perceived parental career expectations and congruence with parents regarding career matters.

Our results also suggest that those working with adolescents should help them: (a) to identify and to be aware of parental career expectations and their degree of career congruence with parents; (b) to understand how these parental variables affect their self-efficacy, career aspirations, planning, and exploration; (c) to master the skills to reconcile their capacities with parental actions; and (d) to communicate their career aspirations and needs in order to obtain relevant responses (e.g., support, expectations) from parents. Additionally, the results suggest that parents should: (a) be aware of the effects of both their career expectations for their children and level of career congruence with their children on the children’s self-efficacy, career aspirations, planning, and exploration; (b) develop a realistic understanding of their children’s career-related capacities as well as determine the type and level of support they might give to their children; and (c) become familiar with current, relevant career information, so that this might inform their career expectations and the support they provide.

Our study tested the well-supported SCCT model containing parental variables, career aspirations, and action outcomes using a sample of adolescents from a collectivist society (i.e., Indonesia). Future research needs to replicate these findings in other collectivist countries, and the model should be tested also in Western countries. Our use of high school students from one collectivist country limits the external validity of the results of the study. Hence, caution should be taken when generalising the findings to other collectivist adolescent subgroups, such as middle school and university students from the same country, or other groups of adolescents from other collectivist countries.
Further, these data were collected at one point in time. Therefore, future studies should test this model longitudinally to examine the temporal relationships between the parental variables and career aspirations and actions. Longitudinal design is also needed to investigate the cyclical nature of the SCCT variables, which have been suggested by career researchers (e.g., Lent et al., 2000), but remains untested in collectivist cultural contexts. Through a longitudinal study, a more comprehensive understanding of the dynamics of adolescent career aspirations and actions at this age and in this context can be obtained. Further, more definitive causal statements can also be made.
Chapter 5 reports on the third study, which investigated the longitudinal social cognitive career choice model that includes the constructs of interest of parental career expectations, adolescent-parent career congruence, self-efficacy, outcome expectations, career aspirations, and the career actions of planning and exploration. This study involved a sample of 954 Indonesian high school students, who were surveyed twice. First, when they were in Grade 10, and second, when they were in Grade 11, six months after the first data collection. The Adolescent-Parent Career Congruence Scale developed in Study 1 was also used in this study to measure congruence with parents regarding career matters. A cross-lagged panel design was used to allow an examination of the reciprocal relationships among the constructs of interest in this study.

This study is under review by the *Journal of Research on Adolescence*. The related notification of re-submission is included in Appendix L. The numbering of tables and figures of the re-submitted version has been modified to match Chapter 5. To avoid any overlap, all references for this study have been integrated into the reference section at the end of this thesis.

Additionally, an abstract based on Study 3 has been accepted for a poster presentation at the *Australian Guidance and Counselling Association National Conference* to be held in Sydney, Australia from 26-28 June 2013. The related notification of acceptance is included in Appendix M.
LONGITUDINAL RELATIONS OF PARENTAL INFLUENCES AND ADOLESCENT CAREER ASPIRATIONS AND ACTIONS IN A COLLECTIVIST SOCIETY

Abstract

Using social cognitive career theory as a framework, we examined the longitudinal effects of proximal parental contextual influences on career aspirations and actions in a collectivist context. We used a sample of 954 Indonesian high school students, and measured parental career expectations, adolescent-parent career congruence, self-efficacy, outcome expectations, career aspirations, planning, and exploration, twice, six months apart. The best fitting model was reciprocal, with the results showing that parental career expectations predicted subsequent career aspirations and planning, and aspirations and congruence with parents regarding career matters predicted future exploration. Self-efficacy and outcome expectations were reciprocally related over time. Self-efficacy served as an across-time predictor of both parental contextual variables. Career exploration predicted future self-efficacy and planning predicted later outcome expectations.

*Keywords*: social-cognitive career theory; parental career expectations; adolescent-parent career congruence; career aspirations; career actions of planning and exploration; collectivist society
The social cognitive career theory choice model (Lent, Brown, & Hackett, 1994) has been tested largely in Western societies, where it has been used to explain the associations between proximal contextual variables and career goals and actions (e.g., Lent et al., 2003; Rogers, Creed, & Glendon, 2008). In these studies, supports and barriers have been the most widely tested variables during the active stages of career decision-making (i.e., when individuals are considering career-related options and are about to make related decisions). These proximal contextual variables have been linked cross-sectionally to career goals and actions in specific subject matter areas (i.e., science, computing, engineering, and mathematics; Lent et al., 2001; Lent et al., 2003), more generally (e.g., career planning and exploration; Betz & Voyten, 1997; Rogers et al., 2008), as well as with specific populations, such as girls and women (e.g., Flores & O’Brien, 2002; Schaefers, Epperson, & Nauta, 1997) and ethnic minority groups (e.g., Ojeda & Flores, 2008; Tang, Fouad, & Smith, 1999).

More recently, proximal contextual variables were investigated longitudinally in relation to college students' career actions (Lent et al., 2008; Lent, Sheu, Gloster, & Wilkins, 2010). However, with the exception of a few studies (e.g., Rogers & Creed, 2011), there has been little research examining the longitudinal relationships among social cognitive career variables during active stages of career decision-making, such as during the high school years (Lent et al., 2008). Moreover, little is known about how proximal contextual variables might operate in non-Western cultural contexts, where manifestations of supports and barriers salient for these contexts (e.g., congruence with parents regarding career matters) have not been tested, especially longitudinally (Lent et al., 2003). Finally, although both Bandura’s (1999, 2000) and Lent et al.’s (1994) models have been used to explain how proximal contextual variables operate in relation to goals and actions (e.g., Lent et al., 2001; Lent et al., 2003), they have not been tested longitudinally using participants from a collectivist society. The current study was
designed to test the longitudinal influences of proximal parental contextual variables (operationalized as perceived parental career expectations and perceived congruence with parents regarding career matters) on high school students’ career goals (i.e., aspirations) and actions (i.e., planning and exploration) in a collectivist culture. We used social cognitive career theory as the general framework, which allowed us to test an integrated model of Bandura’s (1999, 2000) and Lent et al.’s (1994) proposals.

Proximal Contextual Influences from a Social Cognitive Perspective

Originally derived from the general social cognitive theory (Bandura, 1986), social cognitive career theory (Lent et al., 1994) proposed that self-efficacy, outcome expectations, and goals are the essential agency variables that enable individuals to develop personal control over their career development process by affecting the development of career interest and choice behaviours. Additionally, contextual variables, physical attributes, and learning experiences also contribute to this process. Since successful career choice behaviours are not entirely determined by competencies in formulating and actualising goals, but are also influenced by environmental factors perceived to be significant in the pursuit of goals (Lent et al., 2000), a variety of contextual variables have been assessed by career researchers. These environmental influences have been tested as distal contextual variables (i.e., variables which shape the learning experiences that stimulate individuals to develop self-efficacy and positive outcome expectations, such as parents’ education level and role modeling; Flores & O’Brien, 2002; Ojeda & Flores, 2008), and tested as proximal contextual influences (i.e., that affect individuals during active phases of career decision making, such as supports and barriers; Lent et al., 2001; Lent et al., 2003).

While many proximal contextual influences have been assessed, a number of researchers have underlined two views regarding the way these variables might relate to goals and actions, especially within the social cognitive career choice model. The social
cognitive career theory proposes direct paths to goals and actions (Lent et al., 1994), while the general social cognitive theory suggests indirect paths to actions via self-efficacy and goals (Bandura, 1999, 2000). Prior cross-sectional studies have compared and incorporated both views and investigated the role of proximal contextual variables with several kinds of goals, such as choice goals, educational goals, occupational considerations, and many types of actions such as choice stability and persistence (Lent et al., 2001; Lent et al., 2003; Lent et al., 2005; Lent et al., 2011). Most studies demonstrated support for indirect paths to goals and actions, primarily via self-efficacy (Lent et al., 2001; Lent et al., 2003), whereas several studies showed partial and full support for the direct and indirect paths to goals (Lent et al., 2005; Lent et al., 2011).

Proximal contextual variables also have been integrated into longitudinal studies to explain career actions such as career planning, career exploration, and goal persistence (e.g., Lent et al., 2010; Rogers & Creed, 2011). Rogers and Creed (2011) identified a significant across time relationship between support and career exploration in high school students. While the application of the social cognitive career choice model outside the subject matter field has been tested (e.g., to predict career actions of planning and exploration), the bi-directional relationships among the variables in the longitudinal model have been unexplored. The examination of the reciprocal relationship is important because, from the agentic socio-cognitive perspective, individuals are not only reactive to external influences, but are also proactive and able to self-regulate (Bandura, 1999). In other words, individuals are “products” as well as “producers” of their environments (Bandura, 2000). A previous longitudinal study by Lent et al. (2010) favoured a bi-directional model over a unidirectional model to explain the longitudinal relationships among the variables in the social cognitive career choice model. However, the theoretically plausible reverse paths from goal persistence to future outcome expectations were untested, and similar to most earlier studies, this
study tested the social cognitive choice model on college students within a specific subject matter domain, rather than more generally.

**Career-Related Contextual Influences in a Collectivist Society**

The unique features of collectivist cultures have attracted researchers to investigate how contextual variables influence adolescents’ career behaviours in those settings. In collectivist cultures, personal agency is located not only within the individual, but also in affirmative relationships with significant others, mainly parents (Cross & Markus, 1999; Oettingen & Zosuls, 2006). For example, in cultures with a large power distance index, where an unequal distribution of power is accepted (Hofstede & Hofstede, 2005), obedience to parents is usually highlighted. Parents serve as potential sources of their children’s efficacy beliefs and have a considerable influence on their children’s choices (Oettingen & Zosuls, 2006). Therefore, ignoring parental expectations and input when formulating career aspirations and engaging in related actions does not fully capture the individual’s self (Hardin, Leong, & Osipow, 2001).

While person variables (e.g., personality), self-efficacy and outcome expectations serve as strong predictors for career goals and actions in Western contexts (e.g., Rogers et al., 2008), studies with individuals from collectivist cultures have shown that parental involvement and self-efficacy are associated directly with career choice, but personal interests are not (e.g., Tang et al., 1999).

Another environmental variable found to contribute positively to individual career progress is parental career expectations (Fouad et al., 2008; Shea, Ma, & Yeh, 2007). However, not all parental career expectations are perceived as facilitative by adolescents. For example, adolescents who believed that they failed to meet parental expectations were vulnerable to stress (Wang & Heppner, 2002) and experienced more career difficulties (Leung et al., 2011). Additionally, both cross-sectional and longitudinal studies with participants from collectivist cultures have demonstrated that
parental support is an important contextual variable influencing career behaviours (e.g., Cheung & Arnold, 2010; Garcia, Restubog, Toledano, Tolentino, & Rafferti, 2012). For example, Restubog, Florentino, and Garcia (2010) found that parental support and the number of career counselling sessions received were related indirectly to career decidedness via self-efficacy in the six months following the counselling; and in turn, self-efficacy was found to indirectly predict subsequent persistence via career decidedness.

Research, however, has also demonstrated that support from parents has the desired effect only as long as the action is also perceived by the adolescents to be supportive (Garcia et al., 2012). This means that the anticipated consequences of parental career-related actions will be achieved when these actions are subjectively interpreted in the same way by the adolescents (Lent et al., 2000). Other studies have identified several types of correspondence with parents that predict positive career development process, such as adjustment with parental approval, living-up to parental expectations, and adolescent-parent career congruence (e.g., Leong & Serafica, 1995; Leung et al., 2011).

The Present Study

The present study examined whether a standard causal model or a reciprocal model showed the best fit to explain the longitudinal associations between selected proximal, parental contextual variables (perceived parental career expectations and perceived adolescent-parent career congruence) and career aspirations and the career actions of planning and exploration. We utilized a large sample of adolescents from a collectivist society and used the social cognitive career theory as a framework. The study built on previous research in several notable ways: (a) we used the social cognitive career theory perspective to explain both career goals and actions; (b) we involved a large sample of Indonesian high school students, as this country has been
categorised as a collectivist country (Hofstede & Hofstede, 2005); (c) we incorporated Lent’s (1994) and Bandura’s (1999, 2000) views on how proximal contextual variables should operate; (d) we tested these relationships longitudinally, at two time points during an active period of decision making: at Time 1 (T1), when students were considering their education or career-related options, and at Time 2 (T2), after they had made decisions about these options; and (e) we tested all theoretically plausible paths based on the cyclical nature of the social cognitive career variables.

In the across-time, standard-causal model, we expected that: (a) T1 self-efficacy would predict T2 outcome expectations; (b) T1 self-efficacy and outcome expectations would predict T2 aspirations, planning, and exploration; and (c) T1 aspirations would predict T2 planning and exploration (Lent et al., 1994). We also expected that both T1 parental variables would predict (d) T2 aspirations (Bandura, 1999, 2000; Lent et al., 1994); (e) T2 planning and exploration (Lent et al., 1994); and (f) T2 self-efficacy (Bandura, 1999, 2000). The hypothesised standard-causal model is illustrated in Figure 5.1.

Further, we tested a reciprocal model that contained all paths in the standard causal model, as well as several reverse-direction paths, where (g) T1 outcome expectations predicted T2 self-efficacy, as hypothesised by Lent et al. (2008); (h) T1 self-efficacy predicted both T2 parental variables, as proposed by Lent et al. (2000), as individuals who are more efficacious in a particular domain tend to view contextual variables as having more positive influences on their domain-related progress; and (i) T1 planning and exploration predicted T2 self-efficacy and outcome expectations, as suggested by Lent (2005), as the effect of goal progress on self-efficacy and outcome expectations is reciprocal.
**Method**

**Participants**

Participants at T1 were 1056 Grade 10 students from several schools situated in urban areas in a medium sized city in Central Java, Indonesia. Students largely had low to middle socio-economic backgrounds. The sample was 54.4% female, with an age range of 14.4 to 18.8 years ($M = 15.93$, $SD = .51$). On a self-reported measure of school achievement, seven students (.7%) rated their level to be “below average”, 527 (49.6%) rated themselves to be “average”, 522 (49.2%) to be “above average”, and six (.6%) to be “well above average”. Nine students (.9%) reported that their socio-economic status was “much worse” than their peers, 59 (6.2%) reported “a little worse”, 590 (61.8%)
reported “about the same”, 257 (26.9%) reported “a little better”, and 39 (4.1%) indicated “much better” condition. Of the students, 120 (11.4%) reported that they were working while studying. At T2, six months later, 954 Grade 11 students (55.8% female; age range 14.9 to 18.7 years, $M = 16.43$, $SD = .49$) responded to a second survey (response rate = 90%).

Materials

At both data collection points, the survey packets contained measures of parental career expectations, adolescent-parent career congruence, self-efficacy, outcome expectations, career aspirations, planning, and exploration.

Parental career expectations. We assessed students’ perceptions of parental expectations regarding their career options and academic attainment using the 9-item Perceived Parental Expectation Subscale (Academic Achievement Domain) from the Living up to Parental Expectations Scale (Wang & Heppner, 2002). On a 6-point Likert-type scale (1 = not at all expected and 6 = very strongly expected), students responded to items such as “Your parents expect you to pursue their ideal careers (e.g., doctor, teacher...), how strong do you perceive this from your parents?” Higher scores reflect stronger perceived parental career expectations. The test-retest coefficient over a 4-week interval was reported to be moderate and alphas of the Perceived Parental Expectation Subscale-Academic Domain were reported as greater than .80 (Leung, Hou, Gati, & Li, 2011; Wang & Heppner, 2002). Validity evidence was demonstrated through a factor analysis and correlations with related variables (Wang & Heppner, 2002).

Adolescent-parent career congruence. We used the 12-item Adolescent-Parent Career Congruence Scale (XXX, 2013) to measure complementary congruence (i.e., adolescent perceptions that parents are facilitative in their career progress and are satisfied with their career-related actions and progress) and supplementary congruence
(i.e., adolescent perceptions that parents have parallel career values, interests, aspirations, and plans). On a 6-point Likert-type scale (1 = strongly disagree and 6 = strongly agree), students responded to items such as “The progress I have made towards my career goals makes my parents happy.” Higher scores reflect more perceived career congruence with parents. Alpha was reported as .87 (XXX, 2013). Evidence of validity is supported by positive correlations with measures of well-being, living-up-to parental expectations, and parental support (XXX, 2013).

**Self-efficacy.** We assessed students’ level of efficacy regarding their ability to carry out career tasks using the 12-item Career Decision-Making Self-Efficacy Subscale of The Middle School Self-Efficacy Scale (Fouad, Smith, & Enochs, 1997). Students indicated their responses to items such as “How confident are you that you could select one occupation from a list of possible occupations you are considering?” using a 6-point Likert-type scale (1 = not confident at all and 6 = highly confident). Higher scores indicate stronger career decision-making self-efficacy. Previous studies have reported alpha estimates of .89 and .79, and have supported for validity by finding expected correlations with other career-related variables (Creed, Tilbury, Buys, & Crawford, 2011; Fouad et al., 1997).

**Outcome expectations.** We used the 6-item Vocational Outcome Expectations Scale (McWhirter, Rasheed, & Crothers, 2000) to assess students’ optimism regarding expected career outcomes. Students responded along a 6-point Likert-type scale (1 = strongly disagree and 6 = strongly agree) to items such as “My career planning will lead to a satisfying career for me.” Higher scores reflect stronger career outcome expectations. Reliability coefficients of greater than .80 and a 9-week test-retest coefficient of .59 have been reported (Ali, McWhirter, & Chronister, 2005; McWhirter et al., 2000). The scale has shown positive correlations with the Vocational/Educational
EFFECTS OF PARENTAL CONTEXTUAL INFLUENCES


Career aspirations. We used the 10-item Career Aspirations Scale (O’Brien, 1996) to measure students’ goals regarding their future careers. Along a 6-point Likert-type scale (1 = strongly disagree and 6 = strongly agree), students indicated their agreement to items such as “I plan on developing as an expert in my career field.” Higher scores reflect more ambitious career aspirations. Alphas of .74 and .84 have been reported (O’Brien, 1996; Reynolds & Constantine, 2007). O’Brien (1996) provided support for validity by identifying expected relationships with career salience, academic achievement, negative affectivity, and occupational traditionality.

Career planning. We assessed students’ involvement in career planning using the 8-item Career Thinking and Planning Subscale of the Career Salience Scale (Greenhaus, 1971). Students indicated their level of agreement along a 6-point Likert-type scale (1 = strongly disagree and 6 = strongly agree) to items such as “Planning for and succeeding in a career is my primary concern.” Higher scores indicate more involvement in career planning. This scale demonstrated reliability coefficients of .70 and .74 (Creed, Fallon, & Hood, 2009), and showed expected correlations with career exploration, self-regulation, and job-seeking behaviour (Creed et al., 2009).

Career exploration. We measured students’ engagement in self- and environmental exploration activities during the previous three months using the Career Exploration Survey (Stumpf, Colarelli, & Hartman, 1983). Students responded using a 6-point Likert-type scale (1 = almost never and 6 = very often) to five self-exploration questions, such as “I have been contemplating my past life and experiences in relation to my career.” They also responded to six specific environmental exploration questions, such as “I have sought information on specific areas of my career interest.” Higher scores on the 11 items reflect more engagement in career exploration activities.
Reliability coefficient for the full scale has been reported as .90 (Hirschi, 2011), and in support of validity expected relationships with relational support, career planning, and career concerns have been found (Cheung & Arnold, 2010; Creed et al., 2009).

**Translation Procedure**

We used Brislin’s (1986) forward and backward translation technique to convert the original English items into Bahasa (the Indonesian language): (a) the original items were translated into the target language by two bilingual native Indonesian speakers, and the readability of the translation was examined by two monolingual Indonesian speakers; (b) two bilingual native Indonesian speakers blindly back-translated the items into English; (c) to check the precision of meaning, the back-translated version and the original items were then compared, and any inaccuracies were adjusted; and (d) three Indonesian high school students checked whether the final Bahasa version was easy to understand.

**Data Collection Procedure**

The study used a two-wave, longitudinal panel design that involved the same measures at each wave of data collection. Consistent with the previous longitudinal study by Rogers and Creed (2011), which also involved high school students, the six months interval between the two waves was considered sufficient for developmental changes to occur in both predictor and outcome variables. In the last quarter of Grade 10, the students had to choose a school major that would affect their entrance to tertiary education and other career-related trajectories. The six month period over the transition point from Grade 10 to Grade 11 is an active stage of career decision-making, during which they consider majors, plan future careers, and discuss educational paths with significant others, especially parents; it is a time for them to cement career goals, explore the world of work, plan their futures, and manage related resources.
The study was conducted with approval from the authors’ university ethics committee. Prior to the T1 survey, we collected consent forms from both parents and students. Both surveys were administered in class time during school hours by the class teachers and supervised by the first author. Due to some students being away from school or participating in other school activities on the T2 data collection days, 102 students did not take part in the T2 survey. The data reported in this study constitute one part of a larger study (e.g., XXX, 2013).

Results

Attrition Analysis

We compared the students who did not complete the second wave with those who took part in both waves on the variables assessed at T1. We found no differences in terms of age ($p = .51$), work experience ($p = .43$), and socio-economic status ($p = .46$). The two groups of students also did not differ on parental career expectations ($p = .16$), congruence ($p = .52$), self-efficacy ($p = .11$), outcome expectations ($p = .13$), aspirations ($p = .11$), planning ($p = .24$), and exploration ($p = .16$). However, there were more boys (58.8% vs. 44.2%) in the drop-out group, and this group reported lower school achievement ($M = 7.34$ vs. $7.47$, $p < .05$), indicating some bias in the final sample that should be considered when interpreting the results.

Data Management for Model Testing

To achieve an ideal ratio of 20:1 for participants to observed variables (Kline, 1998), we used three and four-item parcels to represent the latent variables (Hau & Marsh, 2004). As suggested by Little, Cunningham, Shahar, and Widaman (2002), we used the item-to-construct balance procedure to compose four-item parcels for adolescent-parent career congruence and self-efficacy, and to create three-item parcels for the rest of the scales. We conducted exploratory factor analyses specifying a single-factor solution for each of the scales and used the three or four items with the highest
loadings to anchor each parcel. We then allocated items from the next group of three or four items to the individual parcels in the reverse order, and so on, until all items were distributed.

**Model Testing**

Prior to assessing the main models, we examined the measurement model. We did not control for any demographic variables in the analyses as there were insignificant or negligible relationships with age, gender, level of achievement, socioeconomic status, and work experience (T1 range = -.08 to .15; T2 range = .09 to .16). We then tested (a) a baseline model consisting of stability and synchronous effects; (b) a standard-causal model, incorporating all paths in the baseline model and the hypothesised lagged paths from the T1 to T2 variables; and (c) a reciprocal model, involving all paths in the standard-causal model and the hypothesized reverse-direction paths. We tested all models using maximum likelihood estimation in the AMOS statistical package and examined model fit using chi-square ($\chi^2$), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and the root mean square error of approximation (RMSEA). As suggested by Hair, Black, Babin, and Anderson (2010), with 954 participants and 46 observed variables, a significant $\chi^2$, CFI and TLI values more than .90 and an RMSEA more than .07 indicate a good fit. Chi square values are sensitive to sample size; thus, we also used the $\chi^2/df$ statistic, with values less than 3 indicating a satisfactory fit. We then compared the alternative nested models by calculating the $\chi^2$ difference statistic.

The measurement model yielded satisfactory fit statistics, $\chi^2(885) = 2239.44, p < .001$, $\chi^2/df = 2.53$, CFI = .94, TLI = .93, RMSEA = .04, with factor loadings ranging from .55 to .87. Table 5.1 presents the correlations among variables, means, standard deviations, and alphas.
The baseline model produced satisfactory fit statistics, $\chi^2(905) = 2030.58$ ($p < .001$), $\chi^2/df = 2.24$, CFI = .95, TLI = .94, RMSEA = .04. The stability of the study variables over the six month period was indicated by the autoregressive path values, which ranged from .50 to .63 (all $p < .001$).

The standard-causal model also demonstrated a satisfactory fit, with $\chi^2(888) = 1975.18$ ($p < .001$), $\chi^2/df = 2.22$, CFI = .95, TLI = .94, RMSEA = .03, which was a significantly better fit compared with the baseline model, $\Delta \chi^2(17) = 55.40$, $p < .001$ (Schumacker & Lomax, 2010). In the standard causal model, T1 parental expectations predicted T2 aspirations ($\beta = .10$, $p < .05$) and T2 planning ($\beta = .08$, $p < .05$); T1 congruence predicted T2 exploration ($\beta = .10$, $p < .05$); T1 self-efficacy predicted T2 outcome expectations ($\beta = .26$, $p < .001$); and T1 outcome expectations ($\beta = -.13$, $p < .05$) and T1 aspirations ($\beta = .12$, $p < .01$) predicted T2 exploration. Path values in the standard-causal model are depicted in Table 5.2.
Table 5.1

*Correlations among Variables, Means, Standard Deviations, and Internal Reliability Coefficients (Cronbach’s Alpha); N = 954*

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*Note.* Bivariate correlations among scales reported above diagonal, all significant at $p < .01$. Correlations among latent variables reported below diagonal, all significant at $p < .001$. 
The reciprocal model yielded the best fit indices, $\chi^2(881) = 1942.54$ ($p < .001$), $\chi^2/df = 2.21$, CFI = .95, TLI = .94, RMSEA = .04, and was a significantly better fit than the baseline model, $\Delta\chi^2(14) = 88.04$, $p < .001$, and the standard-causal model, $\Delta\chi^2(7) = 32.64$, $p < .001$. In the reciprocal model, T1 parental expectations predicted T2 aspirations ($\beta = .09$, $p < .05$) and T2 planning ($\beta = .08$, $p < .05$); T1 congruence ($\beta = .08$, $p < .05$) and T1 aspirations ($\beta = .12$, $p < .01$) predicted T2 exploration; and T1 self-efficacy predicted T2 outcome expectations ($\beta = .22$, $p < .05$). We also found that T1 planning predicted T2 outcome expectations ($\beta = .12$, $p < .05$); T1 exploration ($\beta = .12$, $p < .01$) and T1 outcome expectations ($\beta = .12$, $p < .05$) predicted T2 self-efficacy; and T1 self-efficacy predicted T2 parental expectations ($\beta = .08$, $p < .05$) and T2 congruence ($\beta = .12$, $p < .01$). Path values for the reciprocal model are also illustrated in Table 5.2. The final reciprocal model is presented in Figure 5.2.

**Discussion**

This study examined the longitudinal relationships between two parental variables and career aspirations and the career actions of planning and exploration in a sample of high school students from a collectivist society, using the social cognitive career choice model. As there were no relationships with gender or age in our data, we reported results for boys and girls combined and for ages 13.9 to 17.7 years (T1) collapsed. We have contributed by extending on previous cross-sectional (e.g., Lent et al., 2003; Rogers et al., 2008; Tang et al., 1999) and longitudinal (e.g., Lent et al., 2010; Rogers & Creed, 2011) social cognitive career theory-based studies. We also expanded on earlier studies, in which parental career expectations, adolescent-parent career-related correspondences, and their effects on career-related outcomes have been identified (e.g., Garcia et al., 2012; Leung et al., 2011; Shea et al., 2007; Wang & Heppner, 2002).
Table 5.2

Path Values in the Standard Causal and the Reciprocal Models

<table>
<thead>
<tr>
<th>Time 2 Variables</th>
<th>Path Values in the Standard-Causal Model</th>
<th>Path Values in the Reciprocal Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1 Variables</td>
<td>Path Coefficient T1 to T2</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>Self-efficacy</td>
<td>.54***</td>
</tr>
<tr>
<td></td>
<td>Parental expectations</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td>Congruence</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td><strong>Outcome expectations</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Career planning</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Career exploration</strong></td>
<td></td>
</tr>
<tr>
<td>Outcome expectations</td>
<td>Outcome expectations</td>
<td>.31***</td>
</tr>
<tr>
<td></td>
<td>Self-efficacy</td>
<td>.26***</td>
</tr>
<tr>
<td></td>
<td><strong>Career planning</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Career exploration</strong></td>
<td></td>
</tr>
<tr>
<td>Career aspirations</td>
<td>Career aspirations</td>
<td>.59***</td>
</tr>
<tr>
<td></td>
<td>Self-efficacy</td>
<td>-.04</td>
</tr>
<tr>
<td></td>
<td>Outcome expectations</td>
<td>-.03</td>
</tr>
<tr>
<td></td>
<td>Parental expectations</td>
<td>.10*</td>
</tr>
<tr>
<td></td>
<td>Congruence</td>
<td>.03</td>
</tr>
<tr>
<td>Career planning</td>
<td>Career planning</td>
<td>.51***</td>
</tr>
<tr>
<td></td>
<td>Career aspirations</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Self-efficacy</td>
<td>-.06</td>
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<tr>
<td></td>
<td>Outcome expectations</td>
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<tr>
<td></td>
<td>Parental expectations</td>
<td>.08*</td>
</tr>
<tr>
<td></td>
<td>Congruence</td>
<td>.07</td>
</tr>
<tr>
<td>Career exploration</td>
<td>Career exploration</td>
<td>.52***</td>
</tr>
<tr>
<td></td>
<td>Career aspirations</td>
<td>.12**</td>
</tr>
<tr>
<td></td>
<td>Self-efficacy</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Outcome expectations</td>
<td>-.13*</td>
</tr>
<tr>
<td></td>
<td>Parental expectations</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td>Congruence</td>
<td>.10*</td>
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<tr>
<td>Parental expectations</td>
<td>-</td>
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<td></td>
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<tr>
<td>Congruence</td>
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</table>

*Note. * p < .05, ** p < .01, *** p < .001. Reverse-direction paths are depicted in boldface.
In line with Lent et al.’s (2010) study, the reciprocal model was found to be a better fit than the baseline and standard causal models to explain the longitudinal relationships among the constructs of interest. Our study contributes to the literature in several important ways. First, T1 parental career expectations were found to predict T2 aspirations and T2 planning, suggesting that higher perceived parental career expectations are likely to motivate students to have higher career aspirations and to engage more in career planning over time. This finding is in line with previous cross-sectional findings (e.g., Tang et al., 1999), in which parental variables were found to relate to career outcomes. These results also are in line with Lent et
al.’s (1994) suggestion that cultural context is an important influence on academic and career choices. Further, the non-significant relationship between T1 aspirations and T2 planning suggests that perceived parental career expectations are more relevant in predicting students’ future career planning rather than their own aspirations.

Second, T1 congruence and T1 aspirations were found to predict T2 exploration, suggesting that both pursuing one’s goals and fitting in with parents regarding career issues are important for promoting adolescents’ subsequent career exploration. This finding expands the range of cross-sectional and longitudinal predictors of adolescent career exploration behaviour in collectivist cultures (e.g., Cheung & Arnold, 2010), and extends the findings from previous studies regarding the ability of career goals to predict future actions (e.g., Lapan, Shaughnessy, & Boggs, 1996). However, T1 parental career expectations were not related to T2 exploration. During their active period of career decision-making, these students might recognise that some aspects of parents’ career expectations are not relevant to their subsequent career exploration. Additionally, some time might need to pass for these students to convert their career goals (i.e., aspirations) into goal-directed behaviours (i.e., exploration). Together with congruence, career aspirations might guide these students when engaging in later career exploration activities.

Contrary to expectations, neither T1 parental variables predicted T2 self-efficacy. This finding is inconsistent with Oettingen and Zosul’s (2006) view that in collectivist cultures, especially those with a high power distance index, parents usually are an important source of efficacy information. In our study, self-efficacy at T2 was predicted by T1 exploration, showing that involvement in career exploration activities is likely to promote confidence prospectively in dealing with career-related tasks. Our finding endorses that career exploration functions as goal-directed behaviour, is indicative of performance accomplishment, and is a vital source of efficacy beliefs (Lent et al., 1994; Rogers et al., 2008). This suggests that the six month period of time was sufficient for these students to explore relevant career-related information.
Compared with perceiving parental expectations from and congruence with their parents, what these students obtained from career exploration activities appeared to be more relevant to the development of their later efficacy beliefs.

Additionally, T1 planning was found to predict T2 outcome expectations, suggesting that students with higher involvement in career planning were more likely to have stronger subsequent beliefs about expected outcomes. This finding supports the notion that goal progress (i.e., planning) has a reciprocal effect on outcome expectations (Lent, 2005), and extends previous longitudinal studies that did not test the theoretically plausible path from goal-directed behavior to later outcome expectations (Lent et al., 2008).

We found significant paths from T1 self-efficacy to T2 parental career expectations and T2 congruence. This finding suggests that, over time, students with stronger efficacy beliefs tended to perceive stronger parental career expectations and a higher degree of congruence with parents regarding career matters. These findings are consistent with the Lent et al. (2010) study, which showed that self-efficacy predicted later support. The findings also suggest that individuals with a higher level of confidence in conducting career tasks might tend to see contextual resources in a more positive way (Lent et al., 2000; Lent et al., 2010).

Further, T1 self-efficacy was found to predict T2 outcome expectations, and T1 outcome expectations also predicted T2 self-efficacy, suggesting that having stronger career confidence is likely to enhance future beliefs about expected career outcomes, and vice versa. These findings extend Lent et al.’s (2008) study, which had demonstrated the role of self-efficacy as an across time predictor of outcome expectations, interests, and goals, rather than the reverse. The results also corroborate Lent et al.’s (2010) finding of a bi-directional relationship between self-efficacy and outcome expectations.

Contrary to general social cognitive career theory hypotheses, T1 self-efficacy did not predict T2 aspirations, T2 planning, and T2 exploration. Self-efficacy has been found to be a
strong predictor of career goals and actions for participants in an individualist context, both cross-sectionally (e.g., Lent et al., 2005; Lent, Lent et al., 2011) and longitudinally (e.g., Lent et al., 2008; Lent et al., 2010; Rogers & Creed, 2011). One longitudinal study with participants from a collectivist country showed that self-efficacy predicted career actions over time (Restubog et al., 2010); whereas in other cross-sectional studies the relationship between self-efficacy and career goals and actions was not significant (e.g., Kelly, Gunsalus, & Gunsalus, 2009). Compared with their individualist counterparts, adolescents in collectivist cultures are encouraged to conform to familial norms rather than to develop their own competence in establishing career paths (Oettingen & Zosuls, 2006). Thus, it is not surprising that parental variables at T1 are more relevant in predicting T2 career aspirations and actions than self-efficacy at T1.

Further, T1 outcome expectations did not predict T2 aspirations, T2 planning, and T2 exploration. In the Western context, the predictive ability of outcome expectations has been found to be inconsistent in relation to goals and goal-related progress (e.g., Lent et al., 2003; Lent et al., 2005); however, robust associations were evident in Lent et al.’s (2001) and Byars-Winston et al.’s (2010) cross-sectional studies and Lent et al.’s (2010) longitudinal study. In the non-Western context, the positive cross-sectional relationships between expectancy beliefs and several career outcomes were more stable (e.g., Kelly et al., 2009), while the relationships in longitudinal studies have not been examined.

Taken together, these findings suggest that in cultures that emphasise obedience to and interdependence with authority figures (i.e., parents), children’s behaviours might be less informed by their efficacy beliefs and expectancy judgments (also see Oettingen & Zosuls, 2006). Self-efficacy and expectancy beliefs can still be considered important for adolescents in collectivist cultures; however, their function may differ from that in Western countries by being influenced by the features of the cultural context. According to Bandura (2002), individuals
create their own ways of adapting to their environment that enables them to achieve expected outcomes through agentic action. In this study, self-efficacy is more relevant to later perceived parental career expectations and congruence with parents regarding career matters, rather than to later career aspirations, planning, and exploration; whereas parental influences were more relevant in explaining these subsequent career outcomes.

Finally, by being one of the limited studies to date to investigate career development longitudinally in a collectivist cultural context, this study confirms that in this cultural context, an individual’s agency (i.e., the capability to choose and manage one’s own activities to attain anticipated outcomes; Bandura, 1999) cannot freely operate exclusive of relationships with others, which are perceived as confirmative and supportive (Cross & Markus, 1999); in this case, expectations from and congruence with parents regarding career matters.

As parental contextual variables and adolescents’ social cognitive capacities and actions affect one another, it is essential to propose recommendations that will be useful for parents and children. Our results suggest that those working with adolescents should: (a) help them to understand how perceived parental career expectations influence their future career aspirations and planning and how perceived career congruence with parents affects their subsequent involvement in exploring the world of work; (b) help them to recognise the career expectations that their parents have for them and the degree of career congruence they have with their parents; (c) assist them to be skillful in reconciling any career-related differences they might have with their parents, (d) encourage them to be skilled in communicating their confidence in doing various career tasks, in order to obtain more realistic expectations from parents and to fine tune the degree of congruence with them; (e) encourage them to become involved in career planning, as it raises their future perceptions of desirable outcomes; and (f) help them to actively explore the world of work, as it increases their future level of efficacy.
It is also recommended that parents should: (a) understand that their career expectations influence their children’s subsequent aspirations and planning, and that more career congruence with their children influences their children’s later exploratory behaviours; (b) actively facilitate their children to explore career-related information and their own competencies, as this will promote their children’s future career confidence; and (c) realise that their career expectations and congruence with their children are subject to change after considering their children’s level of self-efficacy. In collectivist settings, it is important to note that expressions of efficacy may be somewhat muffled due to cultural beliefs than lack of self-confidence (Klassen, 2004); thus, parents’ awareness of their children’s confidence in conducting career-related tasks should be highlighted and their readiness to flexibly adjust their career expectations and congruence with their children needs to be encouraged and emphasised.

We tested the temporal relationships of the social cognitive choice model variables using a sample of high school students in a collectivist society. However, as the study involved students from only one country, future studies need to consider replicating the research with samples from other collectivist countries. As we tested the social cognitive choice model to explain career behaviours outside subject matter areas, and used general career scales rather than measures devised to assess specific relationships between predictor and criterion, future studies need to test the capacity of this model to explain career behaviours in specific fields, using related scales. Further, since we used an interval of six months between the first and second data collections, future studies should test the model in different intervals. Finally, as we collected data only twice, we have not tested the ability of one or more agency variables (i.e., self-efficacy, outcome expectations, aspirations) to mediate the longitudinal effect of contextual variables on goals and actions. Future studies need to include more than two data collection waves to obtain a fuller picture of the dynamics of adolescents’ career behaviours in a collectivist cultural context.
CHAPTER 6
DISCUSSION

The first aim of this research program was to develop a measure to assess congruence between parents' desires, requests, and views about their adolescents' future careers, and their adolescent children's career developmental choices and pathways. The second aim was to use this new measure as part of a social cognitive career choice model designed to examine the cross-sectional relationships of parental career expectations and adolescent-parent career congruence, referred to as proximal parental contextual variables, and adolescents' career aspirations and the career actions of planning and exploration. The third aim was to extend this model with longitudinal data, which allowed for testing associations between proximal parental contextual variables and adolescents' career aspirations and the career actions of planning and exploration over time. To achieve these aims, three studies were conducted with large samples of Indonesian high school students, in order to extend research in a collectivist culture, which highly values social relationships and congruent views with families.

The Adolescent-Parent Career Congruence Scale: A New Measure to Assess Congruence with Parents Regarding Career Matters

A review of the literature revealed that there was no existing scale to measure the construct of adolescent-parent career congruence. Study 1 was designed to answer research questions regarding to what extent can a reliable scale to measure adolescent-parent career congruence be developed, and to what extent can evidence of initial validity be established.

The development of the new scale of adolescent-parent career congruence in Study 1 followed a standard pattern for creating psychometric instruments. The items were generated through a review of the existing literature, which included the
interactionist theory of adolescent development (Bronfenbrenner, 1979, 1986, 1994; Vondracek et al., 1986), the person-environment congruence theory (e.g., Muchinsky & Monahan, 1987; Swanson & Fouad, 1999), the relationship between adolescents and their parents in the career domain (e.g., Otto, 2000), the existing measures capturing the concept of congruence with parents regarding career matters (e.g., Wang & Heppner, 2002), the existing studies examining the concept of congruence with parents regarding career matters and its correlates (e.g., Garcia et al., 2012), and the person-organisation fit concept from organisational psychology (Kristof, 1996). The item development stage also involved focus group discussions with Indonesian high school students to ensure that the content of the items would be most relevant for the target sample. Originally written in English, the initial items were then assessed by four independent experts in the areas of career development and psychological testing. These first two steps supported the content validity of the newly devised scale.

Further, as the target sample was Indonesian high school students, the reviewed and selected items were then converted into Bahasa (i.e., the Indonesian language) using Brislin’s (1986) forward and backward translation procedure. Item analyses were then conducted to ensure that all items tapped the construct of adolescent-parent career congruence, were normally distributed, were not redundant to each other, and did not demonstrate gender bias. The exploratory factor analysis with the first half of the sample, and the confirmatory factor analysis with the second half of the sample, verified the initial structure and the reliability of the newly devised two-factor scale. Cronbach’s alpha of the final items also supported the reliability of the scale. Further evidence for the initial construct validity of the new measure was established by finding expected correlations with measures of parental support, living up to parental expectations in academic and career-related areas, and life satisfaction. Overall, these procedures supported the robustness of the new scale.
The results demonstrated that the newly developed 12-item scale can be used to assess two aspects of congruence between adolescents and their parents regarding career matters, namely complementary congruence and supplementary congruence, which are reflected in two subscales. The Complementary Congruence Subscale measures the extent to which adolescents perceive that their parents are helpful in their career progress and are happy or satisfied with their career actions and career progress. The Supplementary Congruence Subscale assesses adolescent perceptions that their parents have similar or matching career values, interests, aspirations, and plans.

Each subscale of the Adolescent-Parent Career Congruence Scale had sound internal reliability and promising initial validity. The Cronbach's alpha coefficients for the subscales were .83 (complementary congruence) and .80 (supplementary congruence), indicating good internal consistency. In addition, the moderate inter-correlation between the two subscales suggests that the two subscales are somewhat independent of one another; yet, they overlap in relation to the concept of congruence with parents regarding career matters. This overlap was supported by the assessment of the factor structure and by the Cronbach's alpha coefficient for the full scale of .87. Further, the newly developed scale also showed expected correlations with the measures of living up to parental career expectations (academic achievement domain), parental support, and life satisfaction.

Career researchers can use the Adolescent-Parent Career Congruence Scale for practical and research purposes. The new scale can be used in the career counseling process, both as a diagnostic tool at the initial stage and an evaluation tool in the middle or at the end of a counselling process. Additionally, the length of the new scale makes it possible for the scale to be used together with other scales in future research. Career researchers can continue to examine the correlates of adolescent-parent career congruence, to expand the nomological network of congruence with parents regarding
career matters, as well as to obtain evidence regarding its predictive validity that has not been examined in Study 1. Additionally, researchers who are interested in cross-cultural research can test the differential correlates of congruence with parents regarding career matters in both collectivist and individualist cultural settings.

**Prediction of Career Aspirations and the Career Actions of Planning and Exploration, and the Relationships among the Study Variables**

The Adolescent-Parent Career Congruence Scale developed in Study 1 was used in Study 2 and Study 3 to measure adolescent-parent career congruence, as one of the proximal parental contextual variables expected to be salient to adolescent career development in the collectivist cultural context (i.e., Indonesia). Study 2 was designed to answer research questions regarding the ways in which parental career expectations and adolescent-parent career congruence are related to career aspirations and the career actions of planning and exploration in a collectivist cultural context, using the cross-sectional social cognitive career choice model. Study 3 was designed to answer research questions regarding the best fit model to explain the longitudinal relationships among the constructs of interest for this study. The cross-sectional model in Study 2 and the reciprocal longitudinal model in Study 3 yielded many of the anticipated significant relationships among the study variables.

In Study 2, adolescents who perceived higher levels of parental career expectations and a higher degree of congruence with their parents regarding career matters were likely to have greater self-efficacy. They also had stronger outcome expectations, and these outcome expectations were related to adolescents’ higher career aspirations. Perceiving higher levels of parental career expectations was also correlated directly with having higher career aspirations. Further, in Study 3, adolescents who reported more elevated career expectations from parents at Time 1 (T1) also reported higher career aspirations at Time 2 (T2), while the preceding congruence with parents
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regarding career matters, self-efficacy, and outcome expectations were not associated with later career aspirations. Accordingly, it can be concluded that parental career expectations have a meaningful and consistent association with adolescents' career aspirations.

As parental career expectations served as both cross-sectional and longitudinal correlates of adolescent career aspirations, these findings extend previous studies in collectivist cultures, where in general, parental variables have been demonstrated to be robust correlates of adolescent career goals (e.g., Ma & Yeh, 2010; Tang et al., 1999), and in particular, parental career expectations have been shown to be prominent correlates of adolescent career behaviours (Fouad et al., 2008, Shea et al., 2007). These results also expand previous studies (Lent et al., 2001; Lent, Brown, Nota et al., 2003; Lent, Brown, Schmidt et al., 2003; Lent et al., 2005; Lent, Paixão et al., 2010), where a variety of pathways from proximal contextual variables to career goals within the social cognitive career choice model have been found.

In the cross-sectional analyses conducted in Study 2, parental career expectations and congruence between adolescents and parents regarding career matters were associated only indirectly with adolescents' career planning. The parental variables were correlated with career planning via self-efficacy, outcome expectations, and career aspirations, and via self-efficacy and outcome expectations. Parental career expectations were also correlated with career planning via career aspirations alone. When associations were examined over time in Study 3, parental career expectations were predictive of adolescents’ involvement in later career planning; however having higher congruence with parents regarding career matters, stronger efficacy beliefs, greater outcome expectations, and higher career aspirations were not associated with more engagement in later career planning. Hence, it can be concluded that initial parental career expectations play a role in concurrent and later career planning.
Self-efficacy beliefs did serve to partially mediate the association between parental career expectations and adolescents' career exploration and to fully mediate the relationship between adolescent-parent career congruence and adolescents' career exploration. When examined in the cross-sectional study (Study 2), adolescents who reported higher levels of parental career expectations and a higher degree of congruence with parents regarding career matters also had stronger self-efficacy, which in turn, was related to adolescents' greater involvement in career exploration activities. Perceiving higher parental career expectations was also associated directly with more engagement in these exploration activities. However, in Study 3, T1 parental career expectations were not associated with adolescents' career exploration at T2. In addition, when adolescents perceived higher congruence with their parents regarding career matters and set higher career aspirations at T1, they reported more engagement in career exploration activities at T2. During their active period of career decision-making, these adolescents might recognise that some aspects of initial career expectations of their parents cannot be applied when they subsequently explore their own career-related capacities and search for career-related information in the real world. Additionally, perceiving a higher degree of career congruence with parents and having higher career aspirations might have a trigger effect on later career exploration, because these variables might guide these adolescents when exploring the world of work.

Given that career aspirations did not serve as a positive cross-sectional correlate of involvement in career exploration activities (Study 2), the significant association between career aspirations and future career exploration (Study 3) demonstrated that it might take some time for these adolescents to convert their career aspirations into goal-directed behaviours (i.e., career exploration). For adolescents at this stage, the 6-month interval might allow them to actualise their career aspirations into actual exploration activities. This period of time might give opportunities for these adolescents to think
about the details of their career aspirations. This is consistent with the adolescent
development literature, which suggests that the more these aspirations are elaborated,
the more likely they will be to drive relevant actions to achieve them (Aarts, 2007).

Findings regarding the prediction of the career actions of planning and
exploration expand the cross-sectional and the longitudinal environmental correlates of
career planning and career exploration, which previously have only been examined
within the social cognitive career choice model with adolescents living in Western
countries (Rogers et al., 2008; Rogers & Creed, 2011). Additionally, these findings
extend the cross-sectional and longitudinal correlates of adolescent career exploration in
the collectivist context (Cheung & Arnold, 2010). Finally, these results also extend
previous studies by providing additional support for the cross-sectional and longitudinal
relationships between proximal parental contextual variables and adolescents' career
aspirations and career actions within the social cognitive career choice model (Lent,
Brown, Schmidt et al., 2003; Lent et al., 2008; Lent Paixão et al., 2010).

It is also important to note that a reciprocal model was tested in Study 3, which
yielded several significant reverse direction paths in the prediction of self-efficacy,
outcome expectations, parental career expectations, and adolescent-parent career
congruence. Also, a reciprocal relationship was found between self-efficacy and
outcome expectations.

While adolescents who perceived higher levels of parental career expectations
and a higher degree of congruence with parents regarding career matters were likely to
report stronger concurrent self-efficacy in Study 2, none of the proximal parental
contextual variables measured at T1 were associated with adolescents' efficacy beliefs at
T2 in Study 3. Yet, adolescents' reports of their involvement in career exploration
activities at T1 were associated with their efficacy beliefs at T2. This suggests that some
time may need to pass for these adolescents to develop greater feelings of efficacy.
following earlier career exploration activities. This result is in line with the notion that performance accomplishment, which is reflected by career exploration in this study, is the strongest source of self-efficacy (Lent et al., 1994). This finding is also consistent with social cognitive theory (Bandura, 2002), which proposes that continuous individual effort to achieve goals is likely to increase the possibility of realising these goals and to enhance a sense of self-efficacy.

Moreover, adolescents with stronger efficacy beliefs at T1 tended to perceive stronger subsequent parental career expectations and a higher degree of later congruence with their parents regarding career matters at T2 in Study 3. It might be that during an active phase of career decision-making, these adolescents have enough opportunity to communicate their level of confidence in handling particular career-related tasks to their parents, and hence, their level of self-efficacy influences the subsequent level of expectations from, and congruence with, their parents regarding career matters.

Additionally, adolescents with higher involvement in career planning at T1 reported stronger beliefs about expected outcomes by T2. Compared to career exploration, career planning, which involves cognitive actions, was more relevant for these adolescents to encourage future beliefs regarding career outcomes. Consistent with the developmental psychology perspective, during the high school years, initial plans are usually confronted with real life experiences, individuals’ new roles, and environmental demands. Accordingly, recalibration of initial plans is needed to adapt to the changing situations (Schulenberg, Bryant, & O’Malley, 2004).

For that reason, it can be concluded that career exploration serves as a vital source of later self-efficacy, whereas career planning is an important basis of subsequent outcome expectations. Consistent with both social cognitive theory and social cognitive career theory (Bandura, 1997; Lent et al., 1994; Lent, 2005) as well as
previous studies (Rogers & Creed, 2011; Rogers et al., 2008), these results confirm that both career exploration and career planning function as goal-directed behaviours and are indicative of performance accomplishment. These results validate the theoretical notion that goal progress (i.e., the career actions of career planning and career exploration) has a reciprocal effect on self-efficacy and outcome expectations (Lent, 2005). These findings are also in line with the developmental view of goals, where continuous attempts to attain goals (i.e., the career actions of planning and exploration) provide individuals with the scaffolding they need for further developmental progress (Brandtstädter, 1998; Nurmi & Salmela-Aro, 2002).

Finally, adolescents who had a higher level of career self-efficacy were more likely to expect to achieve anticipated outcomes in activities in which they feel confident (Study 2). Further, self-efficacy and outcome expectations were related to each other reciprocally over time (Study 3). A higher level of career self-efficacy was likely to encourage future beliefs regarding anticipated career outcomes, and in turn, stronger outcome expectations were likely to further increase self-efficacy beliefs. These results support previous studies where self-efficacy was consistently found to be correlated positively with outcome expectations (e.g., Lent, Brown, Schmidt et al., 2003; Lent et al., 2005), and confirm Lent, Sheu et al.’s (2010) longitudinal study, which revealed a bi-directional relationship between self-efficacy and outcome expectations.

Career intervention programs for adolescents growing up in a collectivist cultural milieu can be developed based on the findings from the cross-sectional and the longitudinal studies in this research program. First, attempts to encourage parents to have high career expectations for their children can be a good way to build adolescents’ initial efficacy beliefs, to stimulate early and later career aspirations, to motivate concurrent career exploration, and to encourage early and future career planning.
Second, efforts to encourage both parents and adolescents to strive for greater congruence in the career domain are also recommended to encourage adolescents’ concurrent self-efficacy, to shape early career aspirations, to motivate initial career planning, and to stimulate early and later exploration of their own capacities and career-related information. At the same time, attempts to help adolescents to outline their career plans are important, as involvement in career planning will shape later beliefs regarding their career outcomes. Finally, interventions that give assistance in career exploration activities will foster adolescents’ future career confidence, and those interventions that encourage parents to be aware of their children’s level of career confidence, will motivate parents to adjust their later career expectations and to regulate their subsequent degree of congruence with their children regarding career matters.

Regarding research, future studies are needed to investigate the supported social cognitive career choice model paths in other collectivist countries and in the Western context. Future research is also necessary to investigate the longitudinal mediator roles of one or more social cognitive variables (e.g., self-efficacy, outcome expectations, and career aspirations) in the relationship between proximal parental contextual influences and career actions, by examining more than two waves of data.

**Conclusion**

This research program was designed to address several research gaps. While there has been an increasing interest in the career-related discrepancy between parents and their adolescent children in recent years, there was no existing psychometrically valid and reliable scale that directly measured the comprehensive concept of adolescent-parent congruence regarding career matters. In Study 1, this research gap was addressed by developing and assessing the initial validity of a new scale, the Adolescent-Parent Career Congruence Scale, to measure a comprehensive concept of congruence between adolescents and their parents regarding career matters.
Further, the cross-sectional and longitudinal associations of parental career expectations and congruence with parents regarding career matters, using the social cognitive career choice model, had not been tested in a collectivist cultural context prior to Studies 2 and 3 reported here. In addition, no previous studies had used Bandura’s (1999, 2000) and Lent et al.’s (1994) models to explain adolescent career aspirations and career actions in this cultural context.

Several limitations of the existing research were also addressed in Studies 2 and 3. First, the most prominent paths in the social cognitive career choice model were identified in order to explain adolescent career aspirations and career actions in a collectivist cultural setting, where agency (i.e., individuals’ capacity to choose, to engage, and to regulate their own activities to realise anticipated outcomes) cannot independently operate exclusive of relationships with others, such as family and parents (Cross & Markus, 1999; Kitayama & Uchida, 2005). Second, these studies are the first to integrate prominent proximal parental contextual variables from a collectivist cultural context (parental career expectations and adolescent-parent career congruence) with constructs identified within the social cognitive career choice model (Lent et al., 1994). Third, the research program integrated for the first time in a collectivist cultural setting the views of Bandura (1999, 2000) and Lent et al. (1994) regarding the ways in which proximal contextual variables relate to career aspirations and career actions of adolescents.

Study 3 in this research program also addressed research gaps by testing the relationships among the variables of interest at two time points during what is expected to be an active period of adolescent career decision-making in a collectivist cultural context (i.e., Indonesia). The first data collection was carried out when the students were considering their majors, and the second data collection was conducted six months later after they had made decisions about these options. Further, the use of a cross-
lagged panel design allowed for a more rigorous interpretation of causality and the opportunity to test the hypothesised reciprocal relationships among the variables in the social cognitive career choice model. Finally, the longitudinal design allowed for testing all theoretically plausible paths in the model based on the cyclical nature of the social cognitive career variables.

Accordingly, the results of three studies in this research program make several unique contributions to the career development literature. This research program yielded a new scale, the Adolescent-Parent Career Congruence Scale, which was developed to assess the level of congruence with parents regarding career matters. Additionally, this research program helped to understand the ways in which the proximal parental contextual variables (parental career expectations and adolescent-parent career congruence) concurrently and longitudinally relate to adolescent career aspirations and the career actions of planning and exploration in a collectivist cultural setting (i.e., Indonesia).
REFERENCES


EFFECTS OF PARENTAL CONTEXTUAL INFLUENCES


APPENDICES
Appendix A

Letter of Approval from Griffith University Human Research Ethics Committee

GRiffith University human research ethics committee

05-Apr-2011

Dear Ms Sawitri

I write further to the additional information provided in relation to the provisional approval granted to your application for ethical clearance for your project "Indonesian Students - How They Plan for and Decide upon an Education and a Career" (GU Ref No: PSY/16/11/HREC). The additional information was considered by Office for Research. This is to confirm that this response has addressed the comments and concerns of the HREC. Consequently, you are authorised to immediately commence this research on this basis. The standard conditions of approval attached to our previous correspondence about this protocol continue to apply.

Regards

Gary Allen
Manager, Research Ethics
Office for Research
G39 room 3.55 Gold Coast Campus, Griffith University
ph: 3735 5585, fax: 5552 9058
email: g.allen@griffith.edu.au
Appendix B

Parent Information and Consent Packs - English Version

(Printed on University Letterhead)

Indonesian Students - How they Plan for and Decide upon an Education and a Career

Parent Information Sheet

RESEARCH TEAM:
Chief Investigators: Professor Peter Creed and Professor Melanie Zimmer-Gembeck
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
Email: p.creed@griffith.edu.au
+61 7 5552 8810

Student Investigator: Ms. Dian Ratna Sawitri
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
Email: d.sawitri@griffith.edu.au
+61 7 5552 9121

Dear Parent

Three high schools in Semarang, Central Java, Indonesia, namely SMAN 1, SMAN 4, and SMAN 9 are taking part in a study examining how Indonesian students plan for and decide upon their education and future career. The researchers are interested in identifying the influences that shape these educational and career decisions. We are seeking your permission for your child to participate in this study. The study forms part of the requirements for the degree of Doctor of Philosophy being completed by Ms Dian Ratna Sawitri, who is working under the supervision of Prof. Peter Creed and Prof. Melanie Zimmer-Gembeck in the School of Psychology at Griffith University, Gold Coast, Australia.

What your child will be asked to do
If you give permission for your child to participate in this study, he/she will be asked to complete two questionnaires, one now, and a second one in about six months’ time. The questionnaires will take approximately 60 minutes each to complete, and will be administered to your child under the supervision of the Student Investigator and your child’s class teacher. The first questionnaire will ask about your child’s educational and career goals, the educational and career plans your child is making, how satisfied your child is with these decisions, and to what extent the decisions are influenced by the people around him/her (e.g., family, friends). The second questionnaire will ask similar questions but will examine if there are changes to your child’s educational and career goals, satisfaction and influences. Your child will also be asked non-identifying information such as their date of birth, gender, academic grades, and parents’ occupation and education level. Your child will not be required to put his/her name on the questionnaire. We will ask your child to give their date of birth, gender and street name (not street number). This combination of information will allow the researchers to match your child’s first questionnaire with the second one.

The expected benefits of the research
There are no direct individual benefits from participating. However, the knowledge gained will help us understand how Indonesian students plan their education and plan for a future career.

Risks to your child
There are no risks to your child. Some children may see some questions as a little personal, e.g., asking about your child’s perceptions of the support received from parents. If your child feels uncomfortable answering any questions, he/she will not be required to do so. Your child will be free to withdraw from the research at any time should they wish without the need to explain his/her decision.
Your child’s confidentiality

The confidentiality of your child’s responses is guaranteed. Your child will not be required to record their name on the questionnaire. In any reports resulting from the research, no individual participant or school will be identifiable.

Your child’s participation is voluntary

Participation in this study is completely voluntary. If, at any time, you or your child wishes to withdraw from the study, you or your child is free to do so, without penalty and without having to explain the reasons for withdrawal. Children who do not participate in the study will simply complete an equivalent activity assigned to them by their teacher while the research is being conducted. The decision to not participate or to withdraw at a later point will not result in any adverse implications for your or your child’s relationship with the school or university.

Questions/Further information

If you have any questions about the study, please do not hesitate to contact the Chief Investigators, Prof. Peter Creed or Prof. Melanie Zimmer-Gembeck, or the Student Researcher, Ms. Dian Ratna Sawitri. The Student Researcher can be contacted also through the Principal of your child’s school.

The ethical conduct of this research

Griffith University conducts research in accordance with the Australian National Statement on Ethical Conduct in Research Involving Humans. If you have any concerns or complaints about the ethical conduct of this research project, you should contact the Manager, Research Ethics on +61 7 3735 5585 (or research-ethics@griffith.edu.au), or the Principal of SMAN 1 on +62 24 8310447 (for parents of students from SMAN 1), or The Principal of SMAN 4 on +62 24 7471540 (for parents of students from SMAN 4), or The Principal of SMAN 9 on +62 24 7472812 (for parents of students from SMAN 9). The Manager Research Ethics will be promptly notified of any concerns received with regards to the ethical conduct of the research.

Feedback to you

Your child’s school will be given feedback regarding the results of the study at the end of the academic year. Parents who would like to obtain a summary of the results at the completion of the study can email or phone Prof. Peter Creed or any of the research team (see contact details on first page) and request a copy be forwarded to them.

Please complete the attached Parent Consent Form, indicating whether you are willing to allow your child to participate in this study. Once you have completed the form, please return it to your child’s teacher by 22 April 2011.

Yours faithfully,

Ms. Dian Ratna Sawitri  Professor Peter Creed  Professor Melanie Zimmer-Gembeck
Indonesian Students - How they Plan for and Decide upon an Education and a Career

RESEARCH TEAM:
Chief Investigators: Professor Peter Creed and Professor Melanie Zimmer-Gembeck
Student Investigator: Ms. Dian Ratna Sawitri
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
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Email: d.sawitri@griffith.edu.au
+61 7 5552 8810
+61 7 5552 9121

CONSENT FORM – TO BE SIGNED BY PARENT

By signing below, I confirm that I have read and understood the information package and in particular that:

- I understand that my child’s involvement in this research will require them to complete two questionnaires, one now and a second one in approximately six months’ time, that will ask questions about education and career goals and plans, and ask them for general demographic information;
- I have had any questions answered to my satisfaction;
- I understand the risks involved;
- I understand that there will be no direct benefit to my child from his/her participation in this research;
- I understand that my child’s participation in this research is voluntary;
- I understand that if I have any additional questions I can contact the research team;
- I understand that my child is free to withdraw at any time, without comment or penalty; I understand that I can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee on +61 7 3735 5585 (or research-ethics@griffith.edu.au) or The Principal of SMAN 1 on +62 24 8310447 (for parents of students from SMAN 1), or The Principal of SMAN 4 on +62 24 7471540 (for parents of students from SMAN 4), or The Principal of SMAN 9 on +62 24 7472812 (for parents of students from SMAN 9), if I have any concerns about the ethical conduct of the project. The Manager Research Ethics will be promptly notified of any concerns received with regards to the ethical conduct of the research.

- I (please tick one of the boxes below)

[ ] Agree
[ ] Do not agree

for my child ____________________________ (child’s name),
___________ (class), to participate in this research.

Signed: ____________________ (parent/guardian)    Date: ___/___/____

PLEASE RETURN THIS SHEET TO SCHOOL BY 22 APRIL 2011

YOU MAY RETAIN THE FIRST TWO PAGES FOR YOUR OWN INFORMATION.
Appendix C

Student Information and Consent Packs - English Version

(Printed on University Letterhead)

Indonesian Students - How they Plan for and Decide upon an Education and a Career

Student Information Sheet

RESEARCH TEAM:
Chief Investigators:  
Professor Peter Creed and Professor Melanie Zimmer-Gembeck  
School of Psychology, Griffith University  
Gold Coast Campus, Qld, Australia, 4222  
Email: p.creed@griffith.edu.au  
+61 7 5552 8810

Student Investigator:  
Ms. Dian Ratna Sawitri  
School of Psychology, Griffith University  
Gold Coast Campus, Qld, Australia, 4222  
Email: d.sawitri@griffith.edu.au  
+61 7 5552 9121

Dear Student

Three high schools in Semarang, Central Java, Indonesia, namely SMAN 1, SMAN 4, and SMAN 9 are taking part in a study examining how Indonesian students plan for and decide upon their education and future career. The researchers are interested in identifying the influences that shape these educational and career decisions. We are seeking your agreement to participate in this study. The study forms part of the requirements for the degree of Doctor of Philosophy being completed by Ms Dian Ratna Sawitri, who is working under the supervision of Prof. Peter Creed and Prof. Melanie Zimmer-Gembeck in the School of Psychology at Griffith University, Gold Coast, Australia.

What you will be asked to do
If you agree to participate in this study, you will be asked to complete two questionnaires, one now, and a second one in about six months’ time. The questionnaires will take approximately 60 minutes each to complete, and will be administered to you under the supervision of the Student Investigator and your class teacher. The first questionnaire will ask about your educational and career goals, the educational and career plans you are making, how satisfied you are with these decisions, and to what extent the decisions are influenced by the people around you (e.g., family, friends). The second questionnaire will ask similar questions but will examine if there are changes to your educational and career goals, satisfaction and influences. You will also be asked non-identifying information such as your date of birth, gender, academic grades, and parents’ occupation and education level. You will not be required to put your name on the questionnaire. You will be asked to give your date of birth, gender and street name (not street number). This combination of information will allow the researchers to match your first questionnaire with the second one.

The expected benefits of the research
There are no direct individual benefits from participating. However, the knowledge gained will help us understand how Indonesian students plan their education and plan for a future career.

Risks to you
There are no risks to you. You might think some are a little personal, e.g., asking about the support you receive from your parents. If you feel uncomfortable answering any questions, you will not be required to do so. You will be free to withdraw from the research at any time should you wish to without the need to explain your decision.
Your confidentiality
The confidentiality of your responses is guaranteed. You will not be required to record your name on the questionnaire. In any reports resulting from the research, no individual participant or school will be identifiable.

Your participation is voluntary
Participation in this study is completely voluntary. If, at any time, you wish to withdraw from the study, you are free to do so, without penalty and without having to explain the reasons for withdrawal. Students who do not participate in the study will simply complete an equivalent activity assigned to them by their teacher while the research is being conducted. The decision to not participate or to withdraw at a later point will not result in any adverse implications for your relationship with the school or university.

Questions/Further information
If you have any questions about the study, please do not hesitate to contact the Chief Investigators, Prof. Peter Creed or Prof. Melanie Zimmer-Gembeck, or the Student Researcher, Ms. Dian Ratna Sawitri. The Student Researcher can be contacted also through the Principal of your school.

The ethical conduct of this research
Griffith University conducts research in accordance with the Australian National Statement on Ethical Conduct in Research Involving Humans. If you have any concerns or complaints about the ethical conduct of this research project, you should contact the Manager, Research Ethics on +61 7 3735 5585 (or research-ethics@griffith.edu.au), or the Principal of SMAN 1 on +62 24 8310447 (for students from SMAN 1), or The Principal of SMAN 4 on +62 24 7471540 (for students from SMAN 4), or The Principal of SMAN 9 on +62 24 7472812 (for students from SMAN 9). The Manager Research Ethics will be promptly notified of any concerns received with regards to the ethical conduct of the research.

Feedback to you
Your school will be given feedback regarding the results of the study at the end of the academic year. Participants who would like to obtain a summary of the results at the completion of the study can email or phone Prof. Peter Creed or any of the research team (see contact details on first page) and request a copy be forwarded to them.

Please complete the attached Participant Consent Form, indicating whether you are willing to participate in this study, before you commence the survey.

Yours faithfully,

Ms. Dian Ratna Sawitri  Professor Peter Creed  Professor Melanie Zimmer-Gembeck
Indonesian Students - How they Plan for and Decide upon an Education and a Career

RESEARCH TEAM:
Chief Investigators:
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Email: d.sawitri@griffith.edu.au
+61 7 5552 9121

CONSENT FORM - TO BE SIGNED BY PARTICIPANT

By signing below, I confirm that I have read and understood the information package and in particular that:

- I understand that my involvement in this research will require me to complete two questionnaires, one now and a second one in approximately six months’ time, that will ask questions about education and career goals and plans, and ask me for general demographic information;
- I have had any questions answered to my satisfaction;
- I understand the risks involved;
- I understand that there will be no direct benefit to me from my participation in this research;
- I understand that my participation in this research is voluntary;
- I understand that if I have any additional questions I can contact the research team;
- I understand that I am free to withdraw at any time, without comment or penalty;
- I understand that I can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee on +61 7 3735 5585 (or research-ethics@griffith.edu.au) or The Principal of SMAN 1 on +62 24 8310447 (for students from SMAN 1), or The Principal of SMAN 4 on +62 24 7471540 (for students from SMAN 4), or The Principal of SMAN 9 on +62 24 7472812 (for students from SMAN 9), if I have any concerns about the ethical conduct of the project. The Manager Research Ethics will be promptly notified of any concerns received with regards to the ethical conduct of the research.

I (please tick one of the boxes below)

☐ Agree  ☐ Do not agree

for me ______________________________________ (participant’s name),

_______ (class), to participate in this research.

Signed:_______________________________ (participant)  Date:___/___/_____

PLEASE SIGN AND RETURN WITH YOUR SURVEY.

YOU MAY RETAIN THE FIRST TWO PAGES FOR YOUR OWN INFORMATION.
Appendix D

Parent Information and Consent Packs - Indonesian Version

(Printed on University Letterhead)

Siswa Indonesia - Bagaimana Mereka Merencanakan dan Mengambil Keputusan Pendidikan dan Karir

Lembar Informasi Siswa

TIM PENELITI:
Ketua Peneliti: Profesor Peter Creed dan Profesor Melanie Zimmer-Gembeck
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
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+61 7 5552 8810

Mahasiswa Peneliti: Dian Ratna Sawitri
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
Email: d.sawitri@griffith.edu.au
+61 7 5552 9121

Yth. Orang Tua Siswa

Tiga Sekolah Menengah Atas di Semarang, Jawa Tengah, Indonesia, yaitu SMAN 1, SMAN 4, dan SMAN 9 ikut serta dalam suatu penelitian tentang bagaimana para siswa Indonesia merencanakan dan mengambil keputusan mengenai pendidikan dan karir. Para peneliti tertarik untuk mengidentifikasi faktor-faktor yang mempengaruhi keputusan-keputusan mengenai pendidikan dan karir. Kami meminta kesediaan Anda untuk mengijinkan anak Anda berpartisipasi dalam penelitian ini. Penelitian ini merupakan bagian dari syarat-syarat untuk meraih gelar Doctor of Philosophy yang sedang ditempuh oleh Dian Ratna Sawitri, yang melakukan penelitian di bawah pembimbingan Prof. Peter Creed and Prof. Melanie Zimmer-Gembeck di School of Psychology, Griffith University, Gold Coast, Australia.

Apa yang harus dilakukan Anak Anda


Keuntungan dari partisipasi dalam riset

Tidak ada keuntungan pribadi dari partisipasi. Namun, informasi yang diperoleh dapat membantu peneliti memahami bagaimana siswa Indonesia membuat rencana mengenai pendidikan dan karir mereka.

Resiko untuk Anak Anda

Tidak ada resiko untuk anak Anda. Anak anda mungkin akan menghadapi beberapa pertanyaan yang bersifat pribadi, seperti pertanyaan mengenai dukungan yang diperoleh dari orang tua. Jika anak Anda
merasa tidak nyaman menjawab pertanyaan, anak Anda tidak akan dipaksakan. Anak Anda akan bebas untuk mengundurkan diri dari keikutsertaan dalam penelitian kapan saja anak Anda inginkan tanpa perlu menjelaskan keputusannya.

Kerahasiaan Anak Anda
Kerahasiaan respon anak Anda adalah dijamin. Anak anda tidak akan diminta mencantumkan nama pada kuesioner. Dalam hasil penelitian, tidak ada individu atau sekolah yang dapat diidentifikasi.

Partisipasi Anak Anda bersifat sukarela
Partisipasi dalam penelitian ini bersifat sukarela. Kapan saja anak Anda ingin mengundurkan diri dari penelitian, ia bebas melakukannya, tanpa penalti dan tanpa harus memberikan alasan. Siswa yang tidak berpartisipasi dalam penelitian ini akan mengerjakan aktivitas yang setara yang akan diberikan oleh guru ketika penelitian berjalan. Keputusan untuk tidak berpartisipasi atau mengundurkan diri selama proses berlangsung tidak akan menimbulkan dampak pada hubungan Anda dan anak Anda dengan sekolah dan universitas asal peneliti.

Pertanyaan/informasi lebih lanjut
Jika Anda mempunyai pertanyaan tentang penelitian ini, jangan ragu untuk mengontak Ketua Peneliti Investigators, Prof. Peter Creed or Prof. Melanie Zimmer-Gembeck, atau mahasiswa peneliti, Dian Ratna Sawitri. Mahasiswa peneliti dalam juga dikontak melalui kepala sekolah.

Kode etik penelitian ini

Feedback kepada Anda
Hasil penelitian akan diberikan kepada pihak sekolah pada akhir tahun ajaran baru. Orang tua siswa yang menginginkan rangkuman hasil penelitian dapat mengontak Prof. Peter Creed atau tim peneliti yang lain (lihat halaman pertama) untuk meminta kopi hasil penelitian.

Mohon formulir kesediaan ini diisi, yang menunjukkan bahwa Anda mengijinkan anak Anda berpartisipasi dalam penelitian ini.

Hormat kami,

Dian Ratna Sawitri   Professor Peter Creed   Professor Melanie Zimmer-Gembeck
Siswa Indonesia - Bagaimana Mereka Merencanakan dan Mengambil Keputusan Pendidikan dan Karir

TIM PENELITI:

Ketua Peneliti:
Profesor Peter Creed dan Profesor Melanie Zimmer-Gembeck
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
Email: p.creed@griffith.edu.au
+61 7 5552 8810

Mahasiswa Peneliti:
Dian Ratna Sawitri
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
Email: d.sawitri@griffith.edu.au
+61 7 5552 9121

LEMBAR KESEDIAAN - UNTUK DITANDATANGANI ORANG TUA SISWA

Dengan menandatangani lembar ini, saya menyatakan bahwa saya telah membaca dan memahami lembar informasi, dan khususnya bahwa:

- Saya memahami bahwa keterlibatan anak saya dalam penelitian ini akan menghendaki anak saya untuk mengisi dua kuesioner, yang pertama sekarang, dan berikutnya kira-kira enam bulan kemudian, yang akan memberikan pertanyaan tentang cita-cita dan rencana berkaitan dengan pendidikan dan karir, dan informasi demografis secara umum;
- Saya berhak mendapatkan jawaban atas pertanyaan saya;
- Saya memahami resikonya;
- Saya memahami bahwa tidak akan ada keuntungan langsung yang diperoleh anak saya dari partisipasi dalam penelitian ini;
- Saya memahami bahwa partisipasi anak saya dalam penelitian ini bersifat sukarela;
- Saya memahami jika memiliki pertanyaan saya dapat mengontak tim peneliti;
- Saya memahami bahwa anak saya bebas untuk mengundurkan diri kapan saja, tanpa alasan atau penalti;
- Saya memahami bahwa saya dapat mengontak Manajer Research Ethics, di Komite Human Research Ethics Griffith University, di nomor +61 7 3735 5585 (atau research-ethics@griffith.edu.au) atau Kepala Sekolah SMAN 1 di nomor +62 24 8310447 (untuk orang tua siswa SMAN 1), atau Kepala Sekolah SMAN 4 di nomor +62 24 7471540 (untuk orang tua siswa SMAN 4), atau Kepala Sekolah SMAN 9 di nomor +62 24 7472812 (untuk orang tua siswa SMAN 9), jika saya mengalami masalah dengan pemberlakuan etik penelitian ini. Manajer Research Ethics akan dihubungi ketika ditemukan masalah dalam pelaksanaan etik dari penelitian ini.

- Saya (beri tanda cek pada salah satu kotak di bawah ini)

☐ Mengijinkan
☐ Tidak mengijinkan

Anak saya __________________________________________ (nama siswa),
___________ (kelas), untuk berpartisipasi dalam penelitian ini.

Tanda tangan:____________________________________(orang tua siswa)

Tanggal:___/___/_____

MOHON DIKEMBALIKAN KE SEKOLAH SELAMBAT-LAMBATNYA 22 APRIL 2011.
ANDA DAPAT MENYIMPAN DUA HALAMAN PERTAMA SEBAGAI INFORMASI
UNTUK ANDA.
Appendix E

Student Information and Consent Packs - Indonesian Version

(Printed on University Letterhead)

Siswa Indonesia - Bagaimana Mereka Merencanakan
dan Mengambil Keputusan Pendidikan dan Karir

Lembar Informasi Siswa

TIM PENELITI:
Ketua Peneliti:
Profesor Peter Creed dan Profesor Melanie Zimmer-Gembeck
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
Email: p.creed@griffith.edu.au
+61 7 5552 8810

Mahasiswa Peneliti:
Dian Ratna Sawitri
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
Email: d.sawitri@griffith.edu.au
+61 7 5552 9121

Yth. Siswa

Tiga Sekolah Menengah Atas di Semarang, Jawa Tengah, Indonesia, yaitu SMAN 1, SMAN 4, dan SMAN 9 ikut serta dalam penelitian tentang bagaimana para siswa Indonesia merencanakan dan mengambil keputusan mengenai pendidikan dan karir. Para peneliti tertarik untuk mengidentifikasi faktor-faktor yang mempengaruhi keputusan-keputusan mengenai pendidikan dan karir. Kami meminta kesediaan Anda untuk berpartisipasi dalam penelitian ini. Penelitian ini merupakan bagian dari syarat-syarat untuk meraih gelar Doctor of Philosophy yang sedang ditempuh oleh Dian Ratna Sawitri, yang melakukan penelitian di bawah pembimbingan Prof. Peter Creed dan Prof. Melanie Zimmer-Gembeck di School of Psychology, Griffith University, Gold Coast, Australia.

Apa yang harus Anda lakukan

Keuntungan dari partisipasi dalam riset
Tidak ada keuntungan pribadi dari partisipasi. Namun, informasi yang diperoleh dapat membantu peneliti memahami bagaimana siswa Indonesia membuat rencana mengenai pendidikan dan karir mereka.

Resiko untuk Anda
Tidak ada resiko untuk Anda. Anda mungkin akan menemukan beberapa pertanyaan yang bersifat pribadi, seperti pertanyaan mengenai dukungan yang diperoleh dari orang tua. Jika Anda merasa tidak
nyaman menjawab pertanyaan, Anda tidak akan dipaksa. Anda akan bebas untuk mengundurkan diri dari keikutsertaan dalam penelitian kapan saja Anda inginkan, tanpa perlu menjelaskan keputusan Anda.

**Kerahasiaan Anda**
Kerahasiaan respon Anda adalah dijamin. Anda tidak akan diminta mencantumkan nama pada kuesioner. Dalam hasil penelitian, tidak ada identitas individu atau sekolah.

**Partisipasi Anda bersifat sukarela**

**Pertanyaan/Informasi lebih lanjut**
Jika Anda mempunyai pertanyaan tentang penelitian ini, jangan ragu untuk mengontak Ketua Peneliti, Prof. Peter Creed atau Prof. Melanie Zimmer-Gembeck, atau mahasiswa peneliti, Dian Ratna Sawitri. Mahasiswa peneliti juga dapat dikontak melalui kepala sekolah.

**Kode etik penelitian ini**

**Feedback kepada Anda**
Hasil penelitian akan diberikan kepada pihak sekolah pada akhir tahun ajaran baru. Peserta yang menginginkan rangkuman hasil penelitian dapat mengontak Prof. Peter Creed atau tim peneliti yang lain (lihat halaman pertama) untuk meminta kopi hasil penelitian.

Mohon formulir kesediaan ini diisi, yang menunjukkan kesediaan Anda untuk berpartisipasi dalam penelitian ini.

Hormat kami,

Dian Ratna Sawitri  Professor Peter Creed  Professor Melanie Zimmer-Gembeck
Siswa Indonesia - Bagaimana Mereka Merencanakan dan Mengambil Keputusan Pendidikan dan Karir

TIM PENELITI:

Ketua Peneliti:
Profesor Peter Creed dan Profesor Melanie Zimmer-Gembeck
School of Psychology, Griffith University
Gold Coast Campus, Qld, Australia, 4222
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+61 7 5552 9121

LEMBAR KESEDIAAN - UNTUK DITANDATANGANI PARTISIPAN

Dengan menandatangani lembar ini, saya menyatakan bahwa saya telah membaca dan memahami lembar informasi, dan khususnya bahwa:

- Saya memahami bahwa keterlibatan saya dalam penelitian ini akan menghendaki saya untuk mengisi dua kuesioner, yang pertama sekarang, dan berikutnya kira-kira enam bulan kemudian, yang akan memberikan pertanyaan tentang cita-cita dan rencana berkaitan dengan pendidikan dan karir, dan informasi demografis secara umum;
- Saya berhak mendapatkan jawaban atas pertanyaan saya;
- Saya memahami resikonya;
- Saya memahami bahwa tidak akan ada keuntungan langsung yang saya peroleh dari partisipasi dalam penelitian ini;
- Saya memahami bahwa partisipasi dalam penelitian ini bersifat sukarela;
- Saya memahami jika memiliki pertanyaan saya dapat mengontak tim peneliti;
- Saya memahami bahwa saya bebas untuk mengundurkan diri kapan saja, tanpa alasan atau penalti;
- Saya memahami bahwa saya dapat mengontak Manajer Research Ethics, di Komite Human Research Ethics Griffith University di nomor +61 7 3735 5585 (atau research-ethics@griffith.edu.au) atau Kepala Sekolah SMAN 1 di nomor +62 24 8310447 (untuk siswa SMAN 1), atau Kepala Sekolah SMAN 4 di nomor +62 24 7471540 (untuk siswa SMAN 4), atau Kepala Sekolah SMAN 9 di nomor +62 24 7472812 (untuk siswa SMAN 9), jika saya mengalami masalah dengan pemberlakuan etik penelitian ini. Manajer Research Ethics akan dihubungi ketika ditemukan masalah dalam pelaksanaan etik dari penelitian ini.
- Saya (beri tanda cek pada salah satu kotak di bawah ini)

[ ] Bersedia
[ ] Tidak bersedia

Bagi saya ____________________________ (nama partisipan),
__________ (kelas), untuk berpartisipasi dalam penelitian ini.

Tanda tangan: ____________________________ (partisipan)

Tanggal: __/__/____

MOHON DITANDATANGANI DAN DIKEMBALIKAN

BERSAMA KUESIONER YANG ANDA ISI.

ANDA DAPAT MENYIMPAN DUA HALAMAN PERTAMA

SEBAGAI INFORMASI UNTUK ANDA.
Appendix F

Research Questionnaire - English Version

(Printed on University Letterhead)

Indonesian Students - How They Plan for and Decide upon an Education and a Career Survey

This is a Griffith University Australia survey to find out how Indonesian students plan for and decide upon their education and future career. As there are no right or wrong answers, we ask that you answer each question as honestly as you can.

Please read the following instructions:
1. Read each question carefully.
2. Do not spend too long on any one question.
3. If you are not sure about your answer, ask yourself which response would be true most of the time for you.
4. If you do not understand any question, you may raise your hand and ask to have it explained.
5. Be sure to answer all the questions.
6. You should be able to complete the survey in about 30 minutes or less.
7. Most of the questions can be answered by ticking inside a box or circling around a response or number.

Here are the examples:

a. A boy would answer this question with a tick:
   What is your gender? □ Male □ Female

b. You would answer this one with a circle:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

I enjoy thinking about and making plans about my future career.

Please answer these questions carefully.

In relation to my career, in the last 3 months I have...

<table>
<thead>
<tr>
<th>Activity</th>
<th>Almost never</th>
<th>Hardly ever</th>
<th>Not very often</th>
<th>Somewhat often</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>... been reflecting on how my past integrates with my future life and career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... been focusing my thoughts on myself as a person in relation to my career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... been contemplating my past life and experiences in relation to my career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... been considering my past experiences when I think about my life and career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... had an insight for my future life and career from thinking about my past experiences.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... been investigating career possibilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
In relation to my career, in the last 3 months I have...

<table>
<thead>
<tr>
<th></th>
<th>Almost never</th>
<th>Hardly ever</th>
<th>Not very often</th>
<th>Somewhat often</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>... been somewhere (e.g., library, career exhibition, internet) specifically to find information on careers.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... obtained information on specific jobs or companies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... talked with people who know about jobs in my career area.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... obtained information on the job opportunities in my career area.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>... sought information on specific areas of my career interest.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

These questions ask about the general plans you are making.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoy thinking about and making plans about my future career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I think deciding on a career is just about the most important decision I will make.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I don't think too much about what type of job I'll be in ten years from now.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I started thinking about jobs and careers when I was young.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Planning for and succeeding in a career is my primary concern.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I often find myself thinking about whether I will enjoy my chosen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Planning for a specific career is not worth the effort; it won’t matter too much what I do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I never really thought about my career very much.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

These questions ask about your specific plans.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I hope to become a leader in my career field.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>When I am established in my career, I would like to manage other employees.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I would be satisfied just doing my job in a career I am interested in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I do not plan to devote energy to getting promoted in the organisation or business I will be working in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>When I am established in my career, I would like to train others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I hope to move up through any organisation or business I work in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Once I finish the basic level of education needed for a particular job, I see no need to continue in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I plan on developing as an expert in my career field.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I think I would like to pursue graduate training in my occupational area of interest.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Attaining leadership status in my career is not that important to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
### How do you feel about your career preparation?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My career planning will lead to a satisfying career for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I will be successful in my chosen career/occupation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The future looks bright for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My talents and skills will be used in my career/occupation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I have control over my career decisions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I can make my future a happy one.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### In relation to your career, how confident are you that you could...

<table>
<thead>
<tr>
<th>Task</th>
<th>Not confident</th>
<th>Not very confident</th>
<th>A little confident</th>
<th>Somewhat confident</th>
<th>Very confident</th>
<th>Highly confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>… find information in the library about careers you are interested in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… make a plan of your educational goals for the next three years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… select one occupation from a list of possible occupations you are considering.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… determine what occupation would be best for you.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… decide what you value most in an occupation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… resist attempts of parents or friends to push you into a career you believe is beyond your abilities or not for you.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… describe the job skills of a career you might like to enter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… choose a career in which most workers are the opposite sex.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… choose a career that will fit your interest.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… decide what kind of schooling you will need to achieve your career goal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… find out the average salary of people in an occupation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>… talk with a person already employed in a field you are interested in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### These questions ask about how your parents help you.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My parents make me feel that I can succeed in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents believe that I can succeed in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents encourage me to do my best in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents are interested in my career plans.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents expect me to keep trying when faced with obstacles.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents serve as role models for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents expect me to go to college.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
These questions ask about you and your parents.

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>What I value most in a career is the same as what my parents value.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents and I have the same way of defining career success.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The career plans I have for myself are similar to the plans that my</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>parents have for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents and I have similar career interests.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents want the same career for me as I want for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents help me to explore my career interests (e.g., by buying me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>books, taking me to career fairs).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents encourage me to explore career areas I am interested in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents support me in my career plans.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents show me how to get the information I need for my career</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>interests (e.g., go to career exhibition, see someone).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents approve of the plans I am making for my future career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I have the ability to achieve the career that my parents expect me to.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I am motivated to achieve the career goals that my parents want me to</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>achieve.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I am interested in the career areas that my parents expect me to enter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The progress I have made towards my career goals makes my parents happy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents are satisfied with the effort I have put in so far to achieve</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>my career goals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents want me to have a career that is different from the one I</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>want.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents show their objections to my preferences to certain career</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>fields.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents push me to pursue a career that I am not interested in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents expect me to pursue a career that is too difficult for me to</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>get into.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My parents are disappointed with the career I want for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

How would you describe your life situation?

<table>
<thead>
<tr>
<th>How would you describe your life situation?</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In most ways my life is close to my ideal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The conditions of my life are excellent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I am satisfied with my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>So far I have gotten the important things I want in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>If I could live my life over, I would change almost nothing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>How strongly do your parents expect this?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all expected</td>
<td>Not expected</td>
<td>Expected a little</td>
<td>Somewhat expected</td>
<td>Expected</td>
<td>Very strongly expected</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>---------</td>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>My parents expect my academic performance to make them proud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to have excellent academic performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to study hard to get a high-paying job in the future</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to perform better than others academically</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to honour my parents and family’s ancestors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to study at their ideal college/university</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to pursue their ideal careers (e.g., doctor, teacher...)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to share the financial burden of the family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents expect me to study their ideal program/major</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To what extent are you currently performing in this area?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>My parents expect my academic performance to make them proud</td>
</tr>
<tr>
<td>My parents expect me to have excellent academic performance</td>
</tr>
<tr>
<td>My parents expect me to study hard to get a high-paying job in the future</td>
</tr>
<tr>
<td>My parents expect me to perform better than others academically</td>
</tr>
<tr>
<td>My parents expect me to honour my parents and family’s ancestors</td>
</tr>
<tr>
<td>My parents expect me to study at their ideal college/university</td>
</tr>
<tr>
<td>My parents expect me to pursue their ideal careers (e.g., doctor, teacher...)</td>
</tr>
<tr>
<td>My parents expect me to share the financial burden of the family</td>
</tr>
<tr>
<td>My parents expect me to study their ideal program/major</td>
</tr>
</tbody>
</table>
What is your gender? □ Male □ Female
Your date of birth: _ _ (dd) _ _ (mm) _ _ _ _ (yy)
Street name of your home address: ____________________________
Are you currently working at a paid part time or casual job as well as studying at high school? □ Yes □ No
What major did you choose? □ Natural sciences □ Social sciences □ Languages
At school, what is your most common level of achievement across all subjects?
1 2 3 4 5 6 7 8 9 10
When you compare yourself to other students at high school, how would you describe your current financial situation?

THANK YOU FOR PARTICIPATING IN THIS RESEARCH

Please return your completed survey directly to your class teacher.
Appendix G

Research Questionnaire - Indonesian Version

(Printed on University Letterhead)

Siswa Indonesia - Bagaimana Mereka Merencanakan dan Mengambil Keputusan Mengenai Pendidikan dan Karir

Ini adalah survei yang dilakukan oleh Griffith University Australia untuk mengetahui bagaimana siswa Indonesia merencanakan dan mengambil keputusan pendidikan dan karir. Karena tidak ada jawaban yang benar atau salah, kamu diminta menjawab sejujurnya.

Baca petunjuk di bawah ini:
1. Baca tiap pertanyaan dengan cermat.
2. Jangan habiskan waktu terlalu lama pada satu pertanyaan.
3. Jika tidak yakin pada jawabanmu, pilih jawaban yang paling sesuai atau sering terjadi padamu.
4. Jika ada yang tidak kamu mengerti, kamu bisa angkat tangan dan menanyakan penjelasannya.
5. Pastikan kamu menjawab seluruh pertanyaan.
6. Kamu diperkirakan dapat menyelesaikan kuesioner ini dalam 30 menit atau kurang dari waktu tersebut.
7. Sebagian besar pertanyaan dapat dijawab dengan memberi tanda cek dalam kotak atau melingkari pilihan respon atau nomor yang tersedia.

Contoh:
- Apa jenis kelaminmu? □ Laki-laki □ Perempuan
- Saya menikmati memikirkan dan membuat rencana tentang karir saya di masa depan

<table>
<thead>
<tr>
<th>Saya menikmati memikirkan dan membuat rencana tentang karir saya di masa depan</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
<th>Sedang</th>
<th>Sangat sedang</th>
<th>Sangat tidak setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Jawablah pertanyaan-pertanyaan berikut ini dengan cermat.

Terkait dengan karir, dalam tiga bulan terakhir ini:

<table>
<thead>
<tr>
<th></th>
<th>Sangat setuju</th>
<th>Agak setuju</th>
<th>Sedang</th>
<th>Sangat sedang</th>
<th>Agak jangankan</th>
<th>Tidak setuju</th>
<th>Sangat jangankan</th>
</tr>
</thead>
<tbody>
<tr>
<td>... saya menyadari bahwa karir dan masa depan saya ada kaitannya dengan masa lalu saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>... saya berpikir tentang diri saya sendiri berkaitan dengan karir saya (misalnya memikirkan karir apa yang cocok untuk saya).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>... saya menyimpulkan bahwa karir saya akan dipengaruhi oleh masa lalu dan pengalaman saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>... saya mempertimbangkan pengalaman saya ketika memikirkan hidup dan karir saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>... saya terinspirasi tentang hidup dan karir masa depan saya ketika memikirkan pengalaman saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
Terkait dengan karir, dalam tiga bulan terakhir ini....

<table>
<thead>
<tr>
<th>Pertanyaan</th>
<th>Jarang</th>
<th>Agak jarang</th>
<th>Sering</th>
<th>Sangat</th>
<th>Sangat-pertama</th>
</tr>
</thead>
<tbody>
<tr>
<td>... saya mengumpulkan informasi mengenai karir apa saja yang mungkin saya pilih.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>... saya mencari (misalnya di perpustakaan atau pameran), secara khusus untuk mendapatkan informasi mengenai minat-mintak karir.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>... saya mendapatkan informasi mengenai pekerjaan atau perusahaan tertentu.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>... saya berdiskusi dengan sesorang yang paham mengenai pekerjaan-pekerjaan di bidang karir yang saya minati.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>... saya mendapatkan informasi mengenai lowongan pekerjaan di bidang karir yang saya minati.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>... saya mencari informasi mengenai bidang-bidang khusus yang tercakup dalam minat karir saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Pertanyaan-pertanyaan berikut ini menanyakan tentang rencanamu secara umum.

<table>
<thead>
<tr>
<th>Pertanyaan</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Sangat selalu</th>
<th>Tidak selalu</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saya senang memikirkan dan merencanakan tentang karir saya dimasa depan.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menurut saya, memutuskan suatu karir adalah keputusan yang paling penting yang akan saya buat.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya tidak banyak memikirkan mengenai pekerjaan apa yang akan saya miliki 10 tahun dari sekarang.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sejak kecil, saya mulai memikirkan pekerjaan dan karir saya dimasa depan.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merencanakan dan berhasil dalam karir adalah perhatian utama saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya sering memikirkan, apakah saya nantinya bisa menikmati pekerjaan yang saya pilih.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merencanakan suatu karir tertentu biasanya hasilnya tidak sepadan dengan usaha yang dilakukan; dengan kata lain, tidak ada gunanya dilakukan.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya tidak pernah sungguh-sungguh memikirkan tentang karir.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
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</tbody>
</table>

Pertanyaan-pertanyaan ini menanyakan tentang rencana khususmu.

<table>
<thead>
<tr>
<th>Pertanyaan</th>
<th>Jarang</th>
<th>Agak jarang</th>
<th>Sering</th>
<th>Sangat</th>
<th>Sangat-pertama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saya berharap bisa menjadi pemimpin dalam bidang karir saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Bila saya sudah mapan dalam karir, saya ingin me-manage / memimpin orang lain.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Saya akan merasa puas, hanya dengan melakukan pekerjaan dalam suatu karir yang saya minati tanpa ingin menjadi pemimpin di bidang tersebut.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Pertanyaan-pertanyaan ini menanyakan tentang rencana khususmu.

<table>
<thead>
<tr>
<th>Pertanyaan</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
<th>Sedikit setuju</th>
<th>Sangat setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saya tidak berencana untuk berusaha keras agar naik jabatan/dipromosikan dalam organisasi/bisnis yang saya kerjakan kelak.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bila saya sudah mapan dalam karir, saya ingin memberikan pelatihan/training pada orang lain.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya berharap untuk naik ke jenjang yang lebih tinggi atau mengalami peningkatan karir melalui organisasi atau bisnis yang saya kerjakan.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setelah saya menyelesaikan pendidikan dasar yang menjadi syarat untuk mendapatkan suatu pekerjaan, saya tidak melihat perlunya melanjutkan belajar ke jenjang lebih tinggi.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya berencana untuk menjadi ahli di bidang karir saya.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya ingin menempuh training bersertifikat (graduate training) dalam bidang kerja yang saya minati.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mencapai level kepemimpinan dalam karir merupakan hal yang tidak terlalu penting bagi saya.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dari apa yang kamu lakukan saat ini, apa yang kamu bayangkan akan terjadi?

<table>
<thead>
<tr>
<th>Pertanyaan</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
<th>Sedikit setuju</th>
<th>Sangat setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rencana karir yang saya miliki saat ini akan memberi peluang pada saya untuk memiliki karir yang memuaskan.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya akan meraih kesuksesan dalam karir yang saya pilih.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masa depan terlihat cerah bagi saya.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
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<tr>
<td>Bakat dan kelebihan yang saya miliki akan bermanfaat (bisa saya gunakan) dalam pekerjaan yang saya tekuni.</td>
<td>1 2 3 4 5 6</td>
<td></td>
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<tr>
<td>Saya bisa mengontrol keputusan-keputusan karir yang saya ambil.</td>
<td>1 2 3 4 5 6</td>
<td></td>
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<tr>
<td>Saya bisa membuat masa depan saya menyenangkan.</td>
<td>1 2 3 4 5 6</td>
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</table>

Dalam kaitannya dengan karirmu, seberapa yakin saat ini bahwa kamu bisa...

<table>
<thead>
<tr>
<th>Pertanyaan</th>
<th>Sangat yakin</th>
<th>Tidak yakin</th>
<th>Sedikit yakin</th>
<th>Sangat yakin</th>
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</thead>
<tbody>
<tr>
<td>... menemukan informasi di perpustakan mengenai karir yang kamu minati.</td>
<td>1 2 3 4 5 6</td>
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<td>... membuat rencana cita-cita yang ingin diraih terkait dengan pendidikan dalam 3 tahun mendatang.</td>
<td>1 2 3 4 5 6</td>
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<td>... memilih satu dari alternatif pekerjaan yang kamu pertimbangkan.</td>
<td>1 2 3 4 5 6</td>
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<td>... menentukan pekerjaan yang tepat untuk kamu.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>... memutuskan mengenai apa yang paling kamu anggap penting dari suatu pekerjaan.</td>
<td>1 2 3 4 5 6</td>
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Dalam kaitannya dengan karirmu, seberapa yakin saat ini bahwa kamu bisa...  

<table>
<thead>
<tr>
<th>... menangkis upaya-upaya orang tua dan teman-teman yang mendorong kamu menekuni suatu karir yang kamu anggap diluar kemampuanmu atau tidak cocok untukmu.</th>
<th>Sama sekali tidak yakin</th>
<th>Tidak yakin</th>
<th>Sedikit yakin</th>
<th>Agak yakin</th>
<th>Yakin</th>
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<tr>
<th>... menjelaskan keterampilan yang dibutuhkan dari suatu pekerjaan di bidang karir yang berpeluang akan kamu geluti.</th>
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<th>Sedikit yakin</th>
<th>Agak yakin</th>
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<tr>
<th>... memilih suatu karir dimana orang-orang yang berkecimpung didalamnya berjenis kelamin berbeda dengan kamu.</th>
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<table>
<thead>
<tr>
<th>... memilih suatu karir yang sesuai dengan minatmu.</th>
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<th>Sedikit yakin</th>
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<table>
<thead>
<tr>
<th>... menentukan jenis program pendidikan yang perlu ditempuh untuk mencapai cita-citamu.</th>
<th>Sama sekali tidak yakin</th>
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<table>
<thead>
<tr>
<th>... mengetahui perkiraan gaji seseorang yang menekuni pekerjaan tertentu.</th>
<th>Sama sekali tidak yakin</th>
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<th>Agak yakin</th>
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<table>
<thead>
<tr>
<th>... berdiskusi dengan seseorang yang telah bekerja dalam bidang yang kamu minati.</th>
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Pertanyaan-pertanyaan ini menanyakan tentang bagaimana orang tuamu membantumu.

<table>
<thead>
<tr>
<th>Orang tua membuat saya merasa percaya diri bahwa saya bisa berprestasi di sekolah.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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<table>
<thead>
<tr>
<th>Orang tua yakin kalau saya bisa berprestasi di sekolah.</th>
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<table>
<thead>
<tr>
<th>Orang tua mendorong saya untuk melakukan usaha maksimal dalam mengerjakan tugas-tugas di sekolah.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
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<table>
<thead>
<tr>
<th>Orang tua menunjukkan ketertarikan pada rencana-rencana karir saya.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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<table>
<thead>
<tr>
<th>Orang tua berharap agar saya terus berusaha ketika dihadapkan pada kendala.</th>
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<th>Tidak setuju</th>
<th>Agak setuju</th>
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<table>
<thead>
<tr>
<th>Orang tua berperan sebagai model atau teladan untuk saya.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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<thead>
<tr>
<th>Orang tua berharap agar saya melanjutkan studi di perguruan tinggi.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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Pertanyaan-pertanyaan ini menanyakan tentang kamu dan orang tuamu.

<table>
<thead>
<tr>
<th>Apa yang saya rasa penting dari suatu karir sama dengan apa yang dirasa penting oleh orang tua.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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<table>
<thead>
<tr>
<th>Orang tua dan saya memiliki cara yang sama dalam mendefinisikan kesuksesan karir.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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<table>
<thead>
<tr>
<th>Rencana-rencana karir yang saya miliki selaras dengan rencana-rencana orang tua untuk saya.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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<table>
<thead>
<tr>
<th>Orang tua dan saya memiliki minat-minat karir yang mirip.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
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<table>
<thead>
<tr>
<th>Karir yang saya inginkan sama dengan karir yang diinginkan orang tua untuk saya miliki.</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
<th>Setuju</th>
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</table>
Pertanyaan-pertanyaan ini menanyakan tentang kamu dan orang tuamu.

<table>
<thead>
<tr>
<th>Pertanyaan</th>
<th>Sangat setuju</th>
<th>Tidak setuju</th>
<th>Agak setuju</th>
<th>Setuju</th>
<th>Sangat setuju</th>
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</thead>
<tbody>
<tr>
<td>Orang tua membantu saya mengeksplorasi minat-minat karir saya (misalnya dengan membelikan buku, atau mengajak ke pameran karir).</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>Orang tua mendorong saya untuk mengeksplorasi bidang karir yang saya minati.</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>Orang tua mendukung saya dalam merealisasikan rencana-rencana karir saya.</td>
<td>1</td>
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</tr>
<tr>
<td>Orang tua menunjukkan pada saya cara mendapatkan informasi-informasi yang saya butuhkan untuk menunjang minat-minat karir saya (misalnya pergi ke pameran karir, atau bertemu dengan seseorang yang menguasai informasi karir tertentu).</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>Orang tua menyetujui rencana-rencana yang saya buat untuk masa depan saya.</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>Saya memiliki kemampuan untuk meraih karir sesuai harapan orang tua.</td>
<td>1</td>
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</tr>
<tr>
<td>Saya termotivasi untuk meraih cita-cita karir sebagaimana yang diinginkan orang tua.</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>Saya tertarik pada bidang-bidang karir yang diharapkan orang tua untuk saya masuki.</td>
<td>1</td>
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<tr>
<td>Kemajuan yang sudah saya buat menuju tercapainya cita-cita karir saya membuat orang tua senang.</td>
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<td>2</td>
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</tr>
<tr>
<td>Orang tua puas dengan usaha yang sudah saya lakukan sejauh ini dalam meraih cita-cita karir saya.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Orang tua mengharapkan karir yang berbeda dari yang saya cita-citakan.</td>
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<td>Orang tua keberatan dengan ketertarikan saya pada bidang-bidang karir tertentu.</td>
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<tr>
<td>Orang tua memaksa saya untuk mengejar suatu karir yang tidak saya minati.</td>
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</tr>
<tr>
<td>Orang tua berharap agar saya mengejar karir tertentu yang saya rasa terlalu sulit dicapai.</td>
<td>1</td>
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<tr>
<td>Orang tua kecewa dengan karir yang saya cita-citakan.</td>
<td>1</td>
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Pertanyaan-pertanyaan ini menanyakan tentang bagaimana keadaanmu.

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<thead>
<tr>
<th>Pertanyaan</th>
<th>Sangat setuju</th>
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<tbody>
<tr>
<td>Hal-hal dalam hidup saya kebanyakan dekat dengan idealisme saya.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tr>
<tr>
<td>Kondisi-kondisi dalam hidup saya sangat baik.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Saya puas dengan hidup saya.</td>
<td>1</td>
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</tr>
<tr>
<td>Sejauh ini saya telah mendapatkan hal-hal terpenting yang saya inginkan dalam hidup saya.</td>
<td>1</td>
<td>2</td>
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<td>5</td>
</tr>
<tr>
<td>Kalau saya memiliki umur lebih, hamper tidak ada yang akan saya ubah dalam hidup saya.</td>
<td>1</td>
<td>2</td>
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<td>5</td>
</tr>
<tr>
<td>Seberapa kuat orang tuamu mengharapkan hal ini?</td>
<td>Pertanyaan-pertanyaan ini menanyakan tentang rencana-rencana orang tuamu untukmu.</td>
<td>Seberapa baik kamu melakukannya?</td>
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<tr>
<td>1 2 3 4 5 6 Orang tua berharap agar prestasi akademik saya membanggakan.</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya bisa meraih prestasi akademik yang istimewa.</td>
<td>1 2 3 4 5 6 Sama sekali tidak baik.</td>
<td></td>
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<tr>
<td>1 2 3 4 5 6 Orang tua berharap agar saya bisa meraih prestasi akademik yang istimewa.</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya belajar sungguh-sungguh untuk mendapatkan pekerjaan dengan gaji tinggi di masa depan.</td>
<td>1 2 3 4 5 6 Tidak baik.</td>
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<tr>
<td>1 2 3 4 5 6 Orang tua berharap agar saya belajar sungguh-sungguh untuk mendapatkan pekerjaan dengan gaji tinggi di masa depan.</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya dapat meraih prestasi lebih baik daripada teman-teman lainnya dalam hal akademik.</td>
<td>1 2 3 4 5 6 Agak Baik.</td>
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<tr>
<td>1 2 3 4 5 6 Orang tua berharap agar saya dapat meraih prestasi lebih baik daripada teman-teman lainnya dalam hal akademik.</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya menghormati orang tua dan leluhur keluarga.</td>
<td>1 2 3 4 5 6 Baik.</td>
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<tr>
<td>1 2 3 4 5 6 Orang tua berharap agar saya menghormati orang tua dan leluhur keluarga.</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya melanjutkan studi di perguruan tinggi (akademi/sekolah tinggi/politeknik/universitas) yang ideal.</td>
<td>1 2 3 4 5 6 Sangat baik.</td>
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<td>1 2 3 4 5 6 Orang tua berharap agar saya melanjutkan studi di perguruan tinggi (akademi/sekolah tinggi/politeknik/universitas) yang ideal.</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya berusaha menjadi sesuatu yang mereka anggap ideal (misalnya dokter, guru,…).</td>
<td>1 2 3 4 5 6 Sangat baik.</td>
<td></td>
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<tr>
<td>1 2 3 4 5 6 Orang tua berharap agar saya berusaha menjadi sesuatu yang mereka anggap ideal (misalnya dokter, guru,…).</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya dapat membantu beban keuangan keluarga.</td>
<td>1 2 3 4 5 6 Sangat baik.</td>
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<td>1 2 3 4 5 6 Orang tua berharap agar saya dapat membantu beban keuangan keluarga.</td>
<td>1 2 3 4 5 6 Orang tua berharap agar saya melanjutkan studi pada jurusan/program yang mereka anggap ideal.</td>
<td>1 2 3 4 5 6 Sangat baik.</td>
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<td>1 2 3 4 5 6 Orang tua berharap agar saya melanjutkan studi pada jurusan/program yang mereka anggap ideal.</td>
<td></td>
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</tr>
</tbody>
</table>
Apa jenis kelaminmu? □ Laki-laki □ Perempuan
Tanggal lahirmu: _ _ (tanggal) _ _ (bulan) _ _ _ _ (tahun)
Nama jalan alamat rumahmu: __________________________

Apakah ketika sekolah di SMA saat ini kamu juga bekerja? □ Ya □ Tidak
Jurusan apa yang kamu pilih di SMA? □ Ilmu Pengetahuan Alam □ Ilmu Pengetahuan Sosial □ Bahasa

Di sekolah, berapa nilai yang pada umumnya kamu dapatkan diseluruh mata pelajaran?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Ketika kamu membandingkan dirimu dengan siswa lain di sekolah, bagaimana kamu menggambarkan kondisi status sosial ekonomimu?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

TERIMA KASIH ATAS PARTISIPASI ANDA DALAM PENELITIAN INI

Kumpulkan survei yang telah diisi lengkap kepada guru kelas.
Appendix H

Notification of Publication of the First Article in the *Journal of Career Assessment*

SAGE Author Services <author.services@sagepub.com> Sat, Mar 30, 2013 at 3:45 PM
Reply-To: Journal Production Editor jessica.mosahari@sagepub.in
To: Sage Contributor <d.sawitri@griffith.edu.au>

Dear Author

We are pleased to say that your article The Adolescent-Parent Career Congruence Scale: Development and Initial Validation will appear in Volume 21 Issue 2 May 2013 pp. 210-226. Your article's home page is 10.1177/1069072712466723. Citing the DOI will always find the version of record online. We are sorry we cannot tell you the exact day of online publication, but if you are registered for Contents Alerts, you will receive a message as soon as the issue is live. You can sign up for Contents Alerts from the Journal home page.

Thank you very much for publishing with SAGE and we hope to work with you again soon.

Kind regards

Jessica Mosahari
Appendix I

Confirmation of Acceptance of the First Study for a Poster Presentation at the 22\textsuperscript{nd} International Society for the Study of Behavioural Development (ISSBD) Biennial Meeting 2012

ISSBD 2012

Proposalapache@issbd.psych.ualberta.ca

Fri, Dec 16, 2011 at 9:53AM

To: d.sawitri@griffith.edu.au

Abstract Title: The Adolescent-parent Career Congruence Scale: Development and Initial Validation

Format: Poster

Status: Accepted

Dear ISSBD 2012 Submitter:

Your proposal has been accepted for presentation at ISSBD 2012 in Edmonton! Please be sure to notify any co-authors of this decision and any other presenters (including co-chairs and discussants) if this is a symposium or poster workshop.

For more information please visit: http://www.issbd2012.com/submissions/abstracts/status.php and enter your abstract ID number: P.202-73953

Important Information

* Scheduled presentation time will be announced in January 2012
* No changes may be made to submissions or scheduled presentation time
* You must register to attend the meeting - http://www.issbd2012.com/webpages/registration.html
Early Career Scholars (PhD in 2005 or later, or in a graduate program leading towards such a degree) may be eligible to apply for travel support - check it out: http://www.issbd2012.com/webpages/program-preconference.html

We are pleased that you chose ISSBD 2012 for presenting your research!

Nancy Galambos

Chair, Local Organizing Committee, ISSBD 2012
Appendix J

Confirmation of Online Publication of the Second Article in the *International Journal for Educational and Vocational Guidance*

Your article in *International Journal for Educational and Vocational Guidance* is now online at SpringerLink

**Springer** <SpringerAlerts@springeronline.com>  
Sat, Jul 27, 2013 at 5:21 AM

Dear Dr. Sawitri,

Your article *Parental influences and adolescent career behaviours in a collectivist cultural setting* has just been published and is available as 'Online First' on SpringerLink:


It is fully accessible to all users at libraries and institutions that have purchased a SpringerLink license. If your article is published under one of our Open Access programs, it will be freely accessible to any user.

**Citation Information**

As an ‘Online First’ article, your paper is fully citable even before the journal's full issue has been compiled! Your article can be cited by its unique Digital Object Identifier (DOI) 10.1007/s10775-013-9247-x in the following form: **Author, Journal Title, Year, DOI**

Later on, after inclusion of your article in the paginated journal issue, please continue to use the DOI alongside the usual citation details in order to enable readers to easily find the article in print and online.

**Download Your e-Offprint (PDF file)**

Your 'Online First' electronic offprint is now available! Download your PDF file using the following link: http://www.springer.com/home?SGWID=0-0-1003-0-0&aqId=2528057&download=1&checkval=928370e03d708a17be2902c92f8dc835

If the PDF file does not open automatically, please copy and paste the URL into your browser window. **Please note that your free e-offprint will only be available for four weeks!**

Your article will be assigned to a specific journal issue. After the production of that issue has been completed, you will be notified by email and a new, paginated e-offprint will become available to you as a free PDF-download. Any additional (printed) offprints or posters you might have ordered will then be shipped to you.

We encourage you to forward this email to your co-authors and mention your article and its DOI on your website or your social media profiles.

Thank you again for publishing with Springer. We look forward to your future contributions!

Best regards,

Your Springer Marketing Team
Appendix K

Confirmation of Acceptance of an Abstract based on the Second Study for a Poster Presentation at the 13th European Congress of Psychology 2013

From: Abstract Services, Congrex Sweden AB <ecp2013.scientific@congrex.com>

Date: 1 February 2013 03:20

Subject: ECP 2013 - Abstract Notification

To: p.creed@griffith.edu.au

Dear Peter Creed,

Thank you for submitting an abstract to the 13th European Congress of Psychology (ECP 2013), held in Stockholm on 9-12 July 2013. We are pleased to inform you that your abstract entitled: Parental Career Expectations and Career Behaviours of Adolescents in a Collectivist Cultural Context (ref. no. 2802913) has been accepted for poster presentation at the ECP 2013.

Your presentation is preliminary scheduled as follows:

Presentation form: Posters

Session date and time: 10/07/2013 at coffee breaks

Presentation number: WE P154 (will be visible on top of the poster board)

Please note that the scheduling of your presentation is preliminary. The final scheduling will appear in the program in late April/early May on the congress website.

The maximum size of your poster is **115cm high and 183cm wide** (landscape format). Your poster should be attached on the surface by material provided by the congress staff. The ECP website will provide presentation guidelines and information on technical equipment, to be updated in March.
Registration

We take this opportunity of reminding you that timely registration for the congress is required. Please note that an accepted presentation can only be included in the final program when the presenting author has registered for the congress by April 10, 2013. If the presenting author has not registered and paid their registration fee by this date, the contribution will be deleted from the program in order to assure that all presentations will be held. In case you have not yet registered, please do so using the ECP 2013 website: http://www.ecp2013.se/contact/registration/ (Click CTRL + on the link; or copy the link and paste into your web browser)

Visa Information

Please make sure to check if you need a visa for entering Sweden well in advance of your visit. We recommend applying for a visa at least three months ahead of your planned trip. You can check status for your country of origin via this link http://www.migrationsverket.se/info/besoka_en.html (Click CTRL + on the link; or copy the link and paste into your web browser)

For more information about passport, visa and invitation letter, please click here.

The ECP 2013 will be based on a mix of presentation forms such as symposia, thematic sessions of oral presentations, poster sessions, panel debates and roundtable sessions. The conference will include a wide variety of presentations covering almost all areas of psychology, and will provide an opportunity to meet researchers and practitioners from a range of different countries.

We look forward to seeing you in Stockholm!

Yours sincerely,

Congrex Sweden AB

on behalf of the ECP 2013 Scientific Committee
Appendix L

Confirmation of Re-Submission of the Third Article to the Journal of Research on Adolescence

JRA MS 2013-049.R1 Submission Confirmation

jra@s-r-a.org <jra@s-r-a.org> Thu, Jun 20, 2013 at 6:32 AM

To: d.sawitri@griffith.edu.au, p.creed@griffith.edu.au

19-Jun-2013

Dear Ms. Sawitri,

Thank you for submitting your manuscript, "Longitudinal Relations of Parental Influences and Adolescent Career Aspirations and Actions in a Collectivist Society".

Your manuscript ID is 2013-049.R1. Please mention this ID number in all future correspondence or when calling the office for questions.

You can also view the status of your manuscript at any time by checking your Author Center after logging in to http://mc.manuscriptcentral.com/jra.

You should receive notification of the status of your manuscript within approximately 90 days. Please feel free to follow up with us if you have not heard from us after 90 days.

PLEASE PRINT THIS PAGE FOR YOUR RECORDS.

Thank you for submitting your manuscript to JRA.

Sincerely,

The JRA Editorial Office
Appendix M

Confirmation of Acceptance of an Abstract based on the Third Study for a Poster Presentation at the Australian Guidance and Counselling Association National Conference 2013

Dian Sawitri <d.sawitri@griffith.edu.au>

Abstract Submission - 2013 AGCA National Conference

Katherine Ducker <kducker@gemspl.com.au> Tue, Apr 9, 2013 at 10:24 AM

To: "d.sawitri@griffith.edu.au" <d.sawitri@griffith.edu.au>

Dear Dian

Abstract: **Reciprocal Association between Parental Influences and Collectivist Adolescent Career Behaviours**

Thank you for your abstract submission for the 2013 Australian Guidance and Counselling Association (AGCA) National Conference to be held at the Novotel Sydney Brighton Beach from Wednesday, 26th to Friday, 28th June, 2013.

We received an extensive range of abstracts of the highest calibre and following a lengthy review process, we would like to advise that while your abstract has not been selected for oral presentation, the Committee would like to extend an offer to you to present your abstract as a **POSTER PRESENTATION** at the 2013 Conference.

As the presenter of a poster, please note the following important guidelines:

**Poster Guidelines**

Conference Posters will be displayed over the two days of the Conference for the benefit of all delegates. Time will be scheduled within the program for poster presenters to provide direct feedback to conference delegates who have further questions about the
content of the Poster. Posters will be exposed for the full duration of the Conference.

Participants will arrive with their poster already printed.

Further guidelines include;

- A0 size - 1189 x 841 mm
- The poster title, name, institution and email address should be included
- Graphics, figures and illustrations should be simple and bold
- Easy to read from 4 to 6 feet away
- Can include printed material, audio visual, photographs or other appropriate media.
  Please keep in mind that there is only a limited display area.
- You must provide all equipment necessary e.g., Display boards, audio visual equipment. If you require assistance in arranging the hire of these items, please contact us for advice. A limited number of display boards may be available for use.
  Please contact us to discuss.
- You must notify us of any power requirements.
- It is the responsibility of the exhibitor to arrange delivery and pick up of the display.

Acceptance of Invitation to Present

- To accept the invitation to produce a poster at the 2013 AGCA National Conference, please complete and return the attached ‘Acceptance of Invitation to Present’ form to GEMS via fax to 02 9747 8366 or email to kducker@gemspl.com.au by no later than **COB Monday, 15th April, 2013**. This document confirms your participation in the Conference.

As a presenter, please note the following important items:

- If you wish to make any changes to the title of your presentation, please advise via return email by **Monday, 15th April, 2013** to Event Manager, Peta Freeman via
email to pfreeman@gemspl.com.au. All changes must be finalised by this date and no extensions to this date will be available.

- As detailed in the Call for Abstracts document, all presenters and co-presenters are required to register for the Conference. Discounted Early Bird registration is now available online until Wednesday, 8th May via the Conference website www.gemsevents.com.au/agca2013.

- All poster presenters will be required to notify GEMS of the details of the dimensions of their poster by no later than Thursday, 20th June, 2013, to ensure adequate space is provided for all posters included in this year's Conference.

- All poster presenters are required to bring their final posters for display on the first day of the Conference, Thursday, 27th June.

- We look forward to working with you over the next few months on what is shaping up to be an outstanding Conference. If you have any questions at all regarding the information outlined above or if you require further information regarding the Conference, please contact me on 02 9744 5252.

Kind Regards,

Katherine