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Career Interest and Knowledge of Lower Grade Students of Primary School

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Children's career development should have been developed since childhood so that they can achieve the basic career adaptability in the future. This research aims to identify the highest orientation of students' career interest and knowledge based on the six career dimensions found in Holland's theory. Moreover, this research also aims to examine the fit model of the career knowledge of lower grade students of primary schools based on Holland's Theory of Career Choice.

This research involved 576 lower grade students of primary schools in DIY, both from private and from public schools, determined by multi stage cluster stratified random sampling. Instruments used in this research are a check list to measure students' career interest, and a test to measure students' career knowledge. Both instruments were validated based on the content validity and their reliabilities were assessed using Alpha Cronbach formula. The coefficient α revealed was 0.935 for career interest and 0.891 for career knowledge. Data collected were analyzed by using descriptive quantitative technique to measure the student's highest orientation of career interest and knowledge, while Confirmatory Factor Analysis (CFA) was used to confirm the model of students' career knowledge based on Holland's theory.

The findings show that the highest orientation of the students' career interest and knowledge is on Social dimension found in Holland's theory. Furthermore, the results of the fit model construct test show that the models of career knowledge of lower grade students of primary schools in DIY fit significantly with the model of career classification in Holland's theory. These findings implicate that students' career development module can be made based on the career knowledge model found in Holland's theory.

Keywords: Career Interest, Career Knowledge, Lower Grade Students of Primary Schools

1. Introduction

Playing an important role in vocational development, career development is often understood as a phase happening only in adolescence period. However, the fact shows that career development begins in early childhood (Super, 1954). More than a few people take a sceptical view of the study of career development in childreen. As a result, there has been not so much research on this topic, especially in Indonesia.

Childhood is considered an important stage in which an individual's career development begins as in this stage they start developing knowledge about various kinds of occupations, imagining their dream careers, and considering their capability as well as self

status in many kinds of occupations based on social influences such as those of gender stereotypes, race, and socio-economics. This period will of course affect the next stage that is determining their education and career. This is in line with what Hartung, Porfeli, and Vondracek (2005) believe that the reason for considering childhood an important period in the beginning of career development is that in this period children have actively involved in the world of work.

According to Wagner (2003) career development beginning since early childhood happens within cultural contexts. Since early childhood, children have developed career aspirations which tend to be more realistic and stable as children grow older (Amstrong and Crombi, 2000). Often, a child's career aspiration on a certain kind of work-field has been initially eliminated due to social stereotypes so that the child may think that the work does not suit their status and culture (Gottfredsome, 1996). As a result, an individual often develops a career not suitable with his or her talent and interest, while actually satisfaction in an individual's work-life commonly determines the harmony in his or her family life (Bandura, 1977; Ozer, 1995). Thus, an intervention in career in the form of a program of guidance and counseling on career needs to be held for children as early as possible.

Guidance and counseling service is a very strategic field in giving career guidance for children especially of primary school. In the middle of this decade, guidance and counseling services in elementary schools have been developed. Accordingly, developmental oriented approaches are utterly necessary to support the maturity of child development.

If children are not provided with knowledge related to career guidance, they can be unprepared for their future and they will have difficulties in entering the coming stages in their psychological development. Although career choice is one of the important decisions in an individual's life, students who are about to graduate from their schools sometimes still have no ideas about their future career. According to Super (1996), somebody's career is developing and it does not start when he or she chooses his or her major at school, but it begins when he or she enters childhood.

Introduction to career awareness to children is a kind of challenge for Indonesian teachers. The problems lie in the limited number of references related to career development on children and teachers who do not have adequate knowledge in career guidance for children. Even in Indonesia it is class teachers who are responsible for holding the program of

career guidance and counselling due to the insufficient number of counselors in primary schools. Thus, a guidance needs to be created for primary school teachers so that they can give career guidance for their students since they are in the early level.

This research is the first year research under multi year research, with the main target of creating modules of career guidance for lower grades of primary school children (of 1st, 2nd, and 3rd year), which can be used by primary school teachers. Accordingly, this first year research was conducted for having a kind of need assessment with some specific purposes, namely: (1) to describe the tendency of children's career interests on certain dimensions among the six career dimensions found in Holland's theory; (2) to describe the tendency of children's most learnt knowledge of certain career dimensions among the six career dimensions found in Holland's theory; and (3) to test the fit model of the classification of career interests based on Holland's theory of career interest.

This research will be beneficial for the critical and constructive study of career development theory, from the perspectives of east culture, especially Indonesia. In addition, the research results will help the implementation of the program of guidance and counselling service in elementary schools because its implementation will be based on the results of students' need assessment so that it can increase students' opportunities to have career development based on their interest and ability, which then reduces the risks of difficulties and failure in career development in the next stages.

2. Theoretical Framework

In this study, the theoretical framework describes: (a) Career Development Theory, and (b) Career Interest and Knowledge.

a. Super's Theory of Career Development

Based on the theory of career development formulated by Super, there are five stages of career development: (a) Growth stage, covering the ages ranging from 4-13 years old; (b) Exploration stage, covering the ages ranging from 14-24 years old; (c) Establishment stage, covering the ages ranging from 25-44 years old; (d) Maintenance stage, covering the ages ranging from 45-65 years old; and (e) Disengagement stage, covering the ages ranging from 66 years old-above (Super, Savickas, & Super, 1996)

Of all the five stages mentioned above, Growth stage is the one which covers the ages of elementary school children. Children start this stage by tryingto find the information about a certain career choice from their parents and teachers. Children start learning how to appreciate achievement values, to develop effective working habits, and to think more about their future. Based on those characteristics, Gies (1990) states that to be able to go through this stage, children really need to develop both physically and psychologically well so that they can expand their self concepts and learn more about various kinds of career choice. According to Super (in Brown & Lent, 2005), an individual's aspiration as well as career choice is the manifestation of his or her self concepts in career.

The purpose of career development is of course not to gain ability but to gain adaptibility and career maturity to make a career decision. Hence, school counselors need to conduct a program of career development through career guidance and counselling to help children to gain career maturity marked by planning, having responsibilities and having career awareness including career interest and knowledge (Sciarra, 2004). Interest and knowledge are the things that become the main focus of the research, which will be discussed in the following sub section.

b. Interest and Career Knowledge

b.1. Career Interest

According to Lent, Brown, and Hackett (1994, p.88), vocational or career interest is "the pattern of likes, dislikes, and indifferences regarding career-relevant activities and occupations".

In relation with career interest, Holland (in Brown, 2002) describes his theory of career development by concerning personality and individuals' career interests. An individual finds a job which will give him or her a space to train his ability and to express his or her attitudes and values. If an individual finds congruence between his or her personality type and their job circumstances, then it can be predicted that he or she will achieve what is called job satisfaction, stability, and

positive performance in his or her lifetime. According to Holland (in Kidd, 2006) there are 6 types of career interests:

1) Realistic: People with this type of career interest tend to prefer to have realistic jobs such as mechanics, surveyors, farmers, and electricians. They have mechanical abilities but their social abilities are not so high.

2) Investigative: People with this type of career interest prefer to have jobs related to research like in the fields of biology, chemistry, physics, anthropology, etc. They have strong abilities in mathematics and physics, but they lack of ability in leadership.

3) Artistic: People with this type of career interest like to be involved in jobs related with arts such as composers, musicians, stage directors, writers, painters, etc. They are emotional, expressive, intutive, extrovert, imaginative people but without well-organized thoughts.

4) Social: People of this type like being teachers, counsellors, or psychologists. They have social ability and talent.

5) Enterprising: People with this type of career interest love being self-employed like having jobs such as sellers, managers, television producers, buyers, etc. These people have leadership and speaking abilities but they are not really good at exact sciences.

6) Conventional: People with this type of career interest love jobs like finance analyst, bankers, and tax officers. They have strong clerical and arithmetical abilities but they lack of artistic abilities.

b.2. Career Knwoledge

Career knowledge according to Super (Sharf, 1992) is the understood information about job assignments in certain positions and all the manners and behavior in doing jobs.

Related with career knowledge, career education is often given to elementary school children through activities like Career Day. There are many things which can be done in this activity such as introducing different types of career based on children's interests, identifying individual and team work, classifying indoor and outdoor jobs, etc. Children can participate in an activity called " Workwear Day". Besides, they can be encouraged to provoke questions (about working time, the

good things about certain jobs, the tools used to work, what subjects need to be learnt for that job, and many others) to presenters or guests being invited in this activity. At the same time, students can make pictures about jobs the find at schools like teachers, admnistration staff, waiters in school cafetaria, bus drivers, school guards, librarians, and so on. They can make pictures describing about the activites conducted by people having those jobs (Beale dan Williams, 2000).

From the activities described above, there are many things to be introduced and taught to children to make them get career knowledge. In this research, the children's career knowldege being examined are in line with the materials explained by Beale dan Williams (2000) related with the material for career education in primary schools, that is, knowledge about various characteristics of career such as:

1) activities conducted in certain jobs;
2) the place of activities, either indoor or outdoor;
3) the workwear;
4) the working time (day or night); and
5) the devices being used.

Meanwhile, the children's knowledge about the kinds of jobs explored in this research is classified according to Holland's job classification.

Based on the theoretical framework, some questions can be drawn:

1) Of Holland's six career dimensions, in which career dimensions are children interested?
2) Of Holland's six career dimensions, children tend to understand the knowledge of which career dimension?
3) What are the five most popular and understood careers among lower grade students of primary schools, and what are the five least popular and understood careers of lower grade students of primary schools?
4) Does the concept of Realistic (R) dimension of Holland fit the empirical data of career knowledge of R dimension of lower grade students of primary schools in DIY, Indonesia?

5) Does the career concept in Investigative dimension (I) in Holland's theory fit the empirical data of career knowledge of I dimension of lower grade students of primary schools in DIY, Indonesia?

6) Does the career concept in Artistic dimension (A) of Holland's fit the empirical data of career knowledge of A dimension of lower grade students of primary schools in DIY, Indonesia?

7) Does the career concept in Social dimension (S) of Holland's fit the empirical data of career knowledge of A dimension of lower grade students of primary schools in DIY, Indonesia?

8) Does the career concept in Enterprising dimension (E) of Holland's fit the empirical data of career knowledge of E dimension of lower grade students of primary schools in DIY, Indonesia?

9) Does the career concept in Conventional dimension (C) of Holland's fit the empirical data of career knowledge of C dimension of lower grade students of primary schools in DIY, Indonesia?

10) Does the consept of career classification in Holland's theory fit the empirical data of lower grade students of primary schools' career knowledge in DIY, Indonesia?

3. Methods, Techniques or Modes of Inquiry

This research is a kind of explorative research with the purpose of having need assessment by using quantitative approach to find the construct of career knowledge appropriate for lower grade primary school children. There are two instruments used in this research, that is, a checklist to measure the level of children's understanding and interest of certain kinds of jobs presented in the six types of interest from Holland's theory, namely Realistic, Investigative, Artistic, Social, Enterprising, dan Conventional (RIASEC). Meanwhile, to assess children's career knowledge self constructed instrument in the form of a test on career knowledge is used. This test includes 5 indicators of career: activity, place, workwear, time, and device. These instruments were validated using content validity, and their reliabilities were tested using Alpha Cronbach each of which were 0.929, 0.935, and 0.891. The data were analyzed using descriptive quantitative technique to find out the level of children's understanding, interest, and career interest, while Confirmatory Factor Analysis (CFA) is used to test the fit model of children's career knowledge based on Holland's theory.

4.   Source of Data

   The data of this research were taken from 576 students of both public and private primary schools in DIY, Indonesia, consisting of 236 first-grade students, 197 second-grade students, and 143 third-grade students. Multi stage cluster stratified random sampling is used to determine the sampling. The first step was determining randomly students of the first, second, and third grade in three sub-districts in each district in DIY, Indonesia. The second step was determining randomly two schools of each sub-district. From this sampling technique, 576 students from 30 classes were taken as samples.

5. Procedure

   Before collecting data, the researchers asked for permission to or notify the local government and the head master of the schools taken as samples, and gave inform consent to the children's parents so that they can give data about career knowledge.

   For fulfilling the checklists and tests, 16 assisstants, who are students of Educational Psychology and Counselling Study Program, were trained to master data collection technique to be able to help students give data in the research intruments. When collecting data, each assistant was responsible for helping 3 students in fulfilling data.
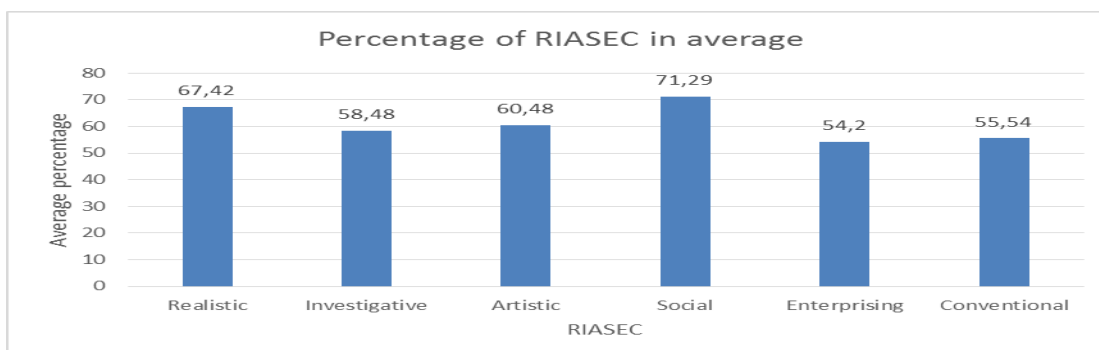
6. Research Findings and Discussion

6.1. Research Findings

The research results are presented based on each research question.

**6.1.1 Of Holland's six career dimensions, in which career dimensions are children interested?**

Figure 6.1, Students' Career Interest based on Holland's Career Dimension

Based on Figure 6.1, the percentage of children's career interests, from the highest to the lowest levels, is shown in the following order: Social Dimension, Realistic Dimension, Artistic Dimension, Investigative Dimension, Conventional Dimension, and Enterprising Dimension. Thus, it can be concluded that the career interests of elementary school children of lower grades in DIY tend to be in social dimension.

6.1.2 **Of Holland's six career dimensions, children tend to understand the knowledge of which career dimension?**

Figure 6.2 Students' Career Knowledge based on Holland's Career Dimension

Percentage of knowledge on RIASEC in average
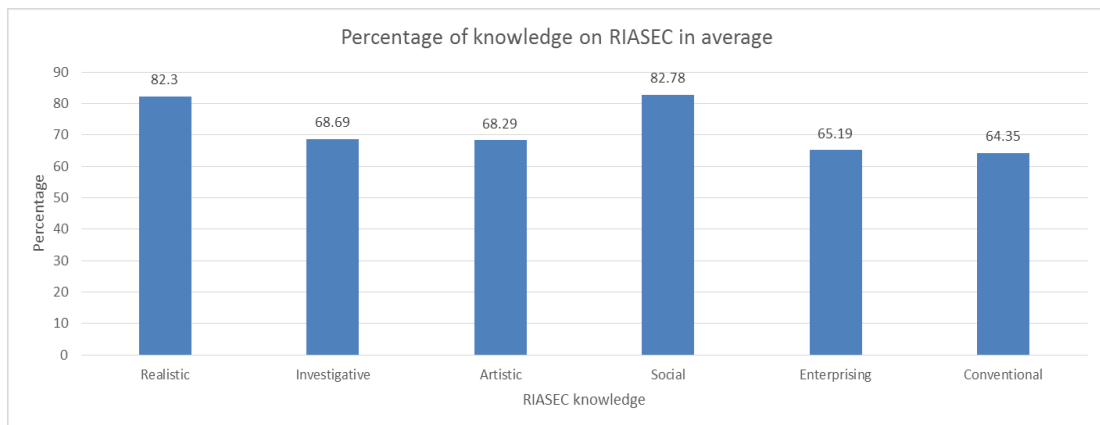
Based on Figure 6.2, the percentage of children's career knowledge, from the highest to the lowest levels, is shown in the following order: Social Dimension, Realistic dmension, Investigative Dimension, Artistic Dimension, Conventional Dimension, and Enterprising Dimension. Thus, it can be concluded that the most understood career knowledge of lower grade students of primary schools in DIY tend to be on Social Dimension.

6.1.3 What are the five most popular and understood careers among lower grade students of primary schools, and what are the five least popular and understood careers of lower grade students of primary schools?

Figure 6.3 Student Career Interest based on the percentage

Grafik 2. Minat terhadap pekerjaan

Based on in Figure 6.3, the five most popular students' career interest are teacher, principal, doctor, singer, and police officer. On the other hand, the least popular are administration employee, sales, counsellor (guidance and counselling counsellor), sculptor, and model.

Figure 6.4
Student Career knowledge based on the percentage
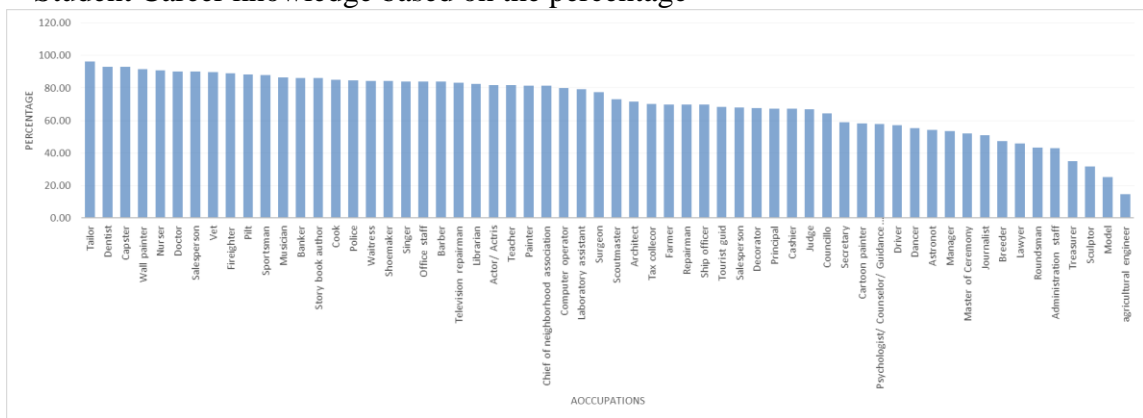
Based on Figure 6.4, it can be seen the most learnt career knowledge of the students are tailor, dentist, hairstylist, painter, and nurse. On the other hand, the least learnt career knowledge of the students are agricultural engineer, model, sculptor, treasurer/accountant, and administration employee.

6.1.4   Does the concept of Realistic (R) dimension of Holland fit the empirical data of career knowledge of R dimension of lower grade students of primary schools in DIY, Indonesia?

Table 6.1 the outcome of Chi-Square test between Holland's model and Empirical Data

Dimension	R	I	A	S	E	C
χ^2	42.28	31.05	30.02	38.55	43.91	39.05
df	31	21	21	30	34	28

p	0.08517	0.07278	0.09157	0.13613	0.11881	0.08009
RMSEA	0.025	0.029	0.027	0.022	0.023	0.026
Conclusion	fit	fit	fit	fit	fit	fit

Note. χ^2= Chi-Square

Based on Table 6.1, it can be seen how on Realistic dimension (R), $\chi^2 = 42.28$, df = 31, or $\chi^2 <$ 2 x df, with p = 0.08517 > 0.05, and RMSEA= 0.025 < 0.08. It can be inferred that the model fits, so the conclusion is that the concept of career knowledge of Realistic dimension (R) of Holland's fits the empirical data of students' career knowledge in R dimension of lower grade students of primary schools in DIY, Indonesia.

Table 6.2 The Result of Item-Fit Test from Dimension Realistic, Investigative, and Artistic with Holland's Model

No Item	R				No Item	I				No Item	A			
	λ	T	p	Con-clusion		λ	T	p	Con-clusion		λ	t	p	Con-clusion
1	0.43	7.58 (>1.96)	> 0.05	Fit	2	0.25	4.92 (>1.96)	> 0.05	Fit	3	0.37	7.05 (>1.96)	> 0.05	Fit
7	0.21	4.57 (>1.96)	> 0.05	Fit	8	0.44	6.73 (>1.96)	> 0.05	Fit	9	0.43	7.35 (>1.96)	> 0.05	Fit
13	0.01	0.18 (<1.96)	< 0.05	Does not fit	14	-0.11	-2.30 (>1.96)	> 0.05	Fit	15	0.50	9.76 (>1.96)	> 0.05	Fit
19	0.31	6.25 (>1.96)	> 0.05	Fit	20	0.50	8.27 (>1.96)	> 0.05	Fit	21	0.36	6.72 (>1.96)	> 0.05	Fit
25	0.35	7.30 (>1.96)	> 0.05	Fit	26	0.42	8.46 (>1.96)	> 0.05	Fit	27	0.07	1.29 (<1.96)	< 0.05	Does not fit
31	0.45	9.84 (>1.96)	> 0.05	Fit	32	0.39	7.15 (>1.96)	> 0.05	Fit	33	0.03	0.63 (<1.96)	< 0.05	Does not fit
37	0.54	11.92 (>1.96)	> 0.05	Fit	38	0.36	7.20 (>1.96)	> 0.05	Fit	39	0.63	12.01 (>1.96)	> 0.05	Fit
43	0.57	12.12 (>1.96)	> 0.05	Fit	44	0.69	12.12 (>1.96)	> 0.05	Fit	45	0.50	9.78 (>1.96)	> 0.05	Fit
49	0.62	12.99 (>1.96)	> 0.05	Fit	50	0.42	8.73 (>1.96)	> 0.05	Fit	51	0.10	1.94 (<1.96)	< 0.05	Does not fit
55	0.37	7.91 (>1.96)	> 0.05	Fit	56	0.39	7.69 (>1.96)	> 0.05	Fit	57	0.37	6.87 (>1.96)	> 0.05	Fit

Note. λ = Factor loading

Table 6.2 shows that among the 10 items of career knowledge in R dimension, item number 1, 7, 19, 25, 31, 37, 43, 49, and 55 have the loading factor (λ) of t > 1.96, and only item number 13 has λ of t < 1.96. These show that almost all of the R career dimension item

fit the realistic concept of Holland's theory, with only item number 13 which shows lacks of contribution in developing R model.

6.1.5 Does the career concept in Investigative dimension (I) in Holland's theory fit the empirical data of career knowledge of I dimension of lower grade students of primary schools in DIY, Indonesia?

Based on Table 6.1., it can be seen that Investigative dimension (I), $\chi^2 = 31.05$, df $=21$, or $\chi^2 < 2$ x df, with p $= 0.07278 > 0.05$, and RMSEA$= 0.029 < 0.08$. It can be inferred that the model fits, so the conclusion is that the concept of investigative knowledge of Holland's fits the empirical data of students' career knowledge in I dimension of lower grade students of primary schools in DIY, Indonesia.

Table 6.2 shows that all item of I dimension career knowledge with the sum of 10, which are item number 2, 8, 14, 20, 26, 32, 38, 44, 50, and 56 have the loading factor (λ) of t > 1.96. These show that all I dimension career knowledge items fit the investigative concept of Holland's theory.

6.1.6 Does the career concept in Artistic dimension (A) of Holland's fit the empirical data of career knowledge of A dimension of lower grade students of primary schools in DIY, Indonesia?

Based on Table 6.1 it can be seen that Artistic dimension A, $\chi^2 = 30.02$, df $=21$, or $\chi^2 < 2$ x df, with p $= 0.09157 > 0.05$, and RMSEA$= 0.027 < 0.08$. It can be inferred that the model fits, so the conclusion is that the concept of artistic knowledge of Holland's fits the empirical data of student's career knowledge in I dimension of lower grade students of primary schools in DIY, Indonesia.

Based on Table 6.2 it can be seen that among the 10 items of A dimension career knowledge, there are three items which have λ of t < 1.96, which are item number 27, 33, and 51, which means that these three items lack contribution in developing A model. Meanwhile, most of the items, which are item number 3, 9, 15, 21, 39, 45, and 57 have the loading factor (λ) of t > 1.96; these show that most of the items of A dimension career knowledge fit the Artistic concept of Holland's theory.

6.1.7 Does the career concept in Social dimension (S) of Holland's fit the empirical data of career knowledge of A dimension of lower grade students of primary schools in DIY, Indonesia?

Based on Table 6.1, it can be seen that in Social dimension (S), $\chi^2 = 38.55$, df $=30$, or $\chi^2 < 2$ x df, with p $= 0.13613 > 0.05$, and RMSEA$= 0.022 < 0.08$. It can be inferred that the

model fits, so the conclusion is that the concept of social knowledge of Holland's fits the empirical data of student's career knowledge in S dimension of lower grade students of primary schools in DIY, Indonesia.

Table 6.3 shows that all career knowledge of S dimension with the sum of 10, item number 4, 10, 16, 22, 28, 34, 40, 46, 52, and 58 have the loading factor (λ) of t > 1.96. These show that all the items of S dimension career knowledge fit the Social concept of Holland's theory.

6.1.8   Does the career concept in Enterprising dimension (E) of Holland's fit the empirical data of career knowledge of E dimension of lower grade students of primary schools in DIY, Indonesia?

Based on Table 6.1 it can be seen that in Enterprising dimension, χ^2 = 43.91, df =34, or χ^2< 2 x df, with p = 0.11881 > 0.05, and RMSEA= 0.023 < 0.08. It can be inferred that the model fits, so the conclusion is that the concept of enterprising knowledge of Holland's fits the empirical data of students' career knowledge in E dimension of lower grade students of primary schools in DIY, Indonesia.

Table 6.2 shows that among the 10 items of dimension E career knowledge, item number 5, 11, 17, 23, 29, 35, 41, 47, and 53 have the loading factor (λ) of t > 1.96, and only item number 59 has the λ of t < 1.96. These show that most of the items of E dimension fit the Enterprising concept of Holland's theory, and only item number 59 shows lack of contribution in developing the R model.

Table 6.3 The Result of Item-Fit Test from Dimension Social, Enterprising, and Conventional with Holland's Model

No Item	S				No Item	E				No Item	C			
	λ	T	p	Conclusion		λ	T	p	Conclusion		λ	t	p	Conclusion
4	0.30	6.76 (>1.96)	> 0.05	Fit	5	0.22	4.06 (>1.96)	> 0.05	Fit	6	0.13	2.67 (>1.96)	> 0.05	Fit
10	0.57	12.75 (>1.96)	> 0.05	Fit	11	0.40	7.38 (>1.96)	> 0.05	Fit	12	0.46	8.41 (>1.96)	> 0.05	Fit
16	0.41	8.94 (>1.96)	> 0.05	Fit	17	0.16	2.91 (>1.96)	> 0.05	Fit	18	0.35	7.14 (>1.96)	> 0.05	Fit
22	0.73	16.77 (>1.96)	> 0.05	Fit	23	0.18	3.22 (>1.96)	> 0.05	Fit	24	0.24	4.82 (>1.96)	> 0.05	Fit
28	0.46	10.58 (>1.96)	> 0.05	Fit	29	0.46	8.38 (>1.96)	> 0.05	Fit	30	0.38	7.58 (>1.96)	> 0.05	Fit
34	0.45	10.29 (>1.96)	>	Fit	35	0.60	10.39 (>1.96)	>	Fit	36	0.25	5.07 (>1.96)	>	Fit

			0.05						0.05					0.05	
40	0.28	5.74 (>1.96)	> 0.05	Fit	41	0.26	4.71 (>1.96)	> 0.05	Fit	42	0.49	9.74 (>1.96)	> 0.05	Fit
46	0.43	7.75 (>1.96)	> 0.05	Fit	47	0.20	3.59 (>1.96)	> 0.05	Fit	48	0.43	8.86 (>1.96)	> 0.05	Fit
52	0.51	11.75 (>1.96)	> 0.05	Fit	53	0.35	6.48 (>1.96)	> 0.05	Fit	54	0.68	13.30 (>1.96)	> 0.05	Fit
58	0.32	7.12 (>1.96)	> 0.05	Fit	59	0.10	1.85 (<1.96)	< 0.05	Does not fit	60	0.49	10.33 (>1.96)	> 0.05	Fit

Note. λ = Factor loading

6.1.9 Does the career concept in Conventional dimension (C) of Holland's fit the empirical data of career knowledge of C dimension of lower grade students of primary schools in DIY, Indonesia?

Based on Table 6.1, it can be seen that in Conventional dimension, χ^2 = 39.05, df =28, or χ^2< 2 x df, with p = 0.08009 > 0.05, and RMSEA= 0.026 < 0.08. It can be inferred that the model fits, so the conclusion is that the concept of conventional knowledge of Holland's fits the empirical data of students' career knowledge in C dimension of lower grade students of primary schools in DIY, Indonesia.

Table 6.3 shows that all the item of C dimension with the sum of 10, which are item 6, 12, 18, 24, 30, 42, 48, 54, and 60, have the loading factor (λ) of t > 1.96. These show that all the items of C dimension career knowledge fit the Conventional concept of Holland's theory.

6.1.10 Does the consept of career classification in Holland's theory fit the empirical data of lower grade students of primary schools' career knowledge in DIY, Indonesia?

Figure 6.5 Loading Factorsof R, I, A, S, E, and C Dimensionof Career Knowledge Model
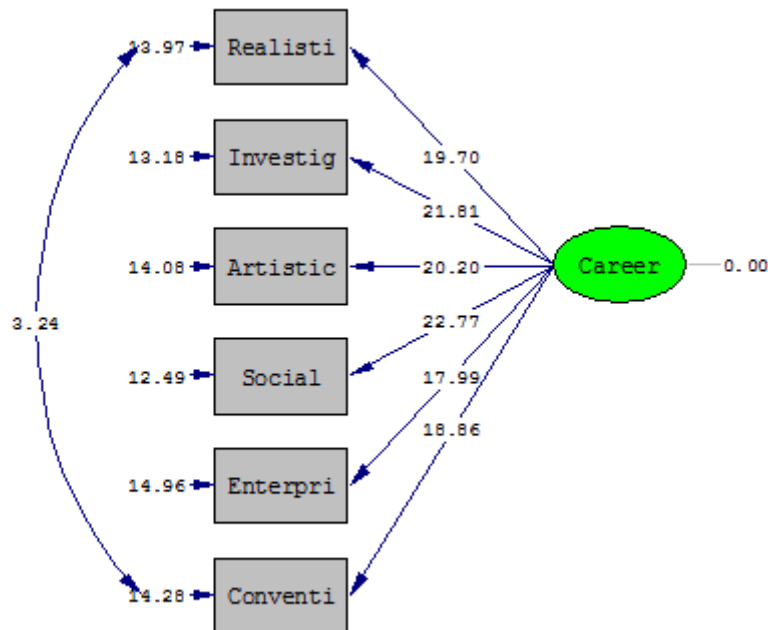
Standardized Solution
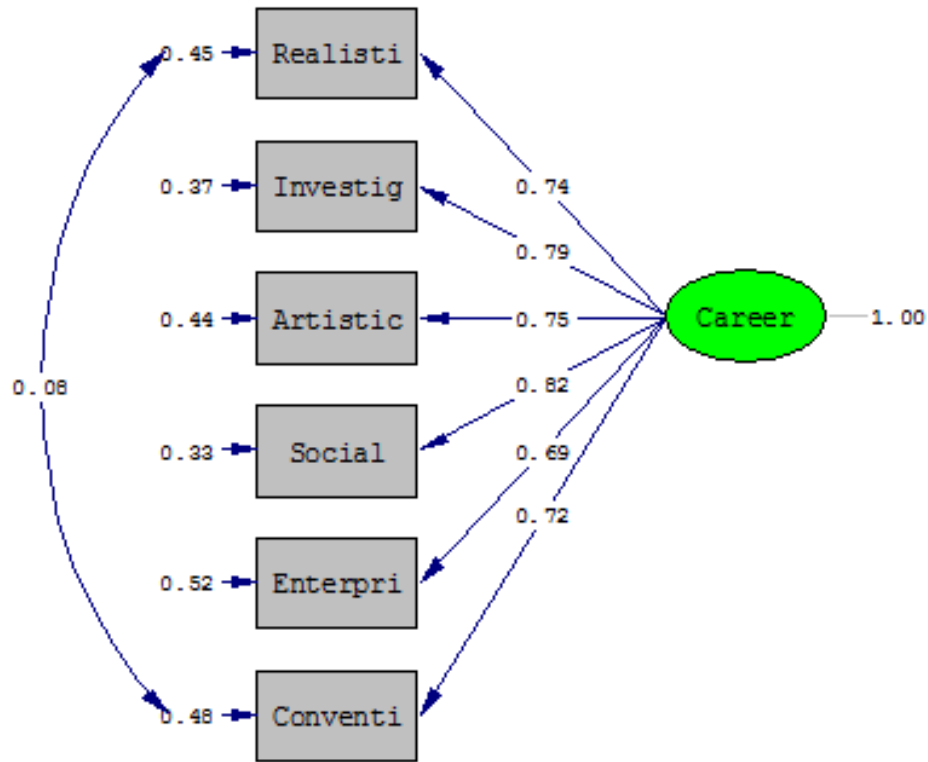
Chi-Square=13.91, df=8, P-value=0.08416, RMSEA=0.036

Figure 6.5 shows that in Career Knowledge model, χ^2 = 13.91, df =8, or χ^2< 2 x df, with p = 0.08416 > 0.05, and RMSEA= 0.036 < 0.08. It can be concluded that the concept of career classification in Holland's theory fits the empirical data of career knowledge of lower grade students of primary schools in DIY, Indonesia

Figure 6.6 Result of T tests of R, I, A, S, E, and C Dimension of Career Knowledge Model

Realisti   13.97

Investig   13.18   19.70

   21.81

Artistic   14.08   20.20   Career   0.00

   22.77

Social   12.49   17.99

   18.86

Enterpri   14.96

Conventi   14.28

3.24

Based on Figure 6.6 it can be seen that in career knowledge model, $\chi^2 = 13.91$, df =8, or $\chi^2 < 2 \times$ df, with p = 0.08416 > 0.05, and RMSEA= 0.036 < 0.08. It can be concluded that the model fits. Furthermore, Figure 6.5 and 6.6 show that R dimension has the loading factor (λ) = 0.74 with t = 19.7 (>1.96), I dimension has the loading factor (λ) = 0.79 with t = 21.81 (> 1.96), A dimension has the loading factor (λ) = 0.75 with t = 20.20 (> 1.96), dimension S has the loading factor (λ) = 0.69 with t = 17.99 (> 1.96), and C dimension has the loading factor (λ) = 0.72 with t = 18.86 (> 1.96). Thus, the concept of career classification in Holland's theory fits the empirical data of career knowledge of lower grade students of primary schools in DIY, Indonesia.

6.2 Discussion

From the data analysis, the research reveals that the career interests and the mostly understood career knowledge of lower grade students of primary school children in DIY tend to be in social dimension. This is reasonable considering the fact that the participants' age ranges from 6-8 years old, which is categorized as children's middle period age and school age (Berk, 2010). Based on Bronfenbrenner's theory of ecology, the elements belonging to the microsystem environment are family, school, health services, peer groups, religious group, and the playgrounds in which they play around their neighborhoods (Santrock, 2011). As a result, the career which they know and in which they are interested tend to be the career

found in the microsystem environment, proven by the fact that children's career interest and knowledge are in social dimension. When observed in detail, the five most popular career among children are teacher, principal, doctor, singer, and police officers. This is because people with these kinds of professions are those who exist in the children's microsystem environment, which make the professions familiar to them; besides, characters with professions such as teacher, principal, doctor, and police officer are considered as authority characters which have high status in the Asian children's point of view (Kim & Turiel, 1996; Yau, Smetana, & Metzger, 2008) and are quite appealing for them.

Related to the items which do not really help develop the models of each dimension, this was obviously caused by a number of things such as the inappropriate answer choice, the use of unclear descriptions (although having been guided by the research assisstants to understand the test questions), or the fact that the knowledge of what activities an individual does in certain career positions is completely not understood by children. Item number 13 is taken as an example. Trying to reveal the knowledge of working hours and given the alternative time which are in the morning, in the afternoon, and in the evening, children can probably get confused about whether it is in the morning or in the evening as what they know is that generally farmers work between morning untill afternoon, which include mid-day in it. Meanwhile, for item number 27, it reveals that it would be better to explain about scarf used as a part of a dancer's costume by using the word "selendang" instead of "sleyer". Item number 33 reveals knowledge of what is done by models by using the term "memamerkan pakaian di atas panggung" which is probably less effective than the term "memperagakan pakaian". For item 51 related to sculptor and item 59 related to lawyers, it is probably difficult to reveal children's knowledge only verbally since lower grade students of primary schools are still in the stage of concrete operational in their cognitive development (Santrock, 2011); thus, it is expected that the module, with the use of pictures and short stories, will be easily understood by the students.

The congruence between models of career knowledge being tested by using Holland's theory based on empirical data obtained from lower grade students of primary schools shows the results are in line with those of the previous meetings having the east cultural background, that is the similarity between four to six types and Holland's theory (Kidd, 2006).

This research results implicate that the module for the career development of lower grade students of primary school becoming the first target in this multi-year research can be based on model construct found in Holland's theory, consisting of six dimensions namely

Realistic, Investigative, Artistic, Social, Enterprising, dan Conventional (RIASEC) dimensions. It is expected that the module can contribute to give career guidance based on the personality of the individual being guided as what is stated as the purpose of the theory. According to Holland (in Brown, 2002), there are three principles becoming the base of Holland's theory about an individual's adaptation in the working place: (a) People and the working place can be categorized into six kinds of interests: investigative, artistic, social, enterprising, dan conventional interests; (b) The career choice is the result of the efforts to achieve congruence between interest and environment; (c) The congruence results in job satisfaction and stability. Thus, although children's personality is developing and still unstabel, guidance given as early as possible is expected to be able to guide children to achieve congruence among their interests, abilities, environment, values and characters and their future career.

7. Conclusion and Suggestion

Based on the findings and discussion above, it can be concluded that both career interest and career knowledge of lower grade students of primary schools in DIY are leaning towards Social dimension. The reason behind is that their developing stage is still in the school age period, so the environment that they face is mostly school environment and family. This is proven in the fact that the most popular career that students choose are teacher, principal, doctor, singer, and police officer. Most of them are career in Social dimension. Meanwhile, the most known career knowledge of the students is equal between Social dimension and Realistic dimension. The least popular career with only limited knowledge is around Conventional and Enterprising dimensions. In addition, it can also be concluded that the concept of career classification in Holland's theory (RIASEC) mostly fits the empirical data of career knowledge of lower grade students of primary schools in DIY, Indonesia. However, in the test of each dimension, some test items of Realistic, Artistic, and Enterpising dimension need revision as they lack contribution in developing the model. Thus, based on the need assessment done in the research this year, it is recommended that the career guidance module for lower grade students of primary schools, which is the target of the second-year research, can be based on the career classification model of Holland which consists of six dimensions, namely Realistic, Investigative, Artistic, Social, Enterprising, and Conventional dimensions. Moreover, the career guidance module should encorage students to

explore the less popular career and less known knowledge, which are Enterprising and Conventional dimensions.

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