The Validity of Career Readiness Module-Cognitive Information Processing (CRM-CIP)

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Abstract: The career development of university students is a transition process from education to career that needs them to be ready to plan, explore, make choices and make career decisions appropriate with one’s interest, talent and ability. Thus, the Career Readiness Module-Cognitive Information Processing (CRM-CIP) was developed as an intervention aimed to increase the students’ career readiness. This research aim to analysis the content validity of CRM-CIP. The content validity analysis used the expert consensus evaluation that consisted of eight experts. The research findings showed that the value of content validity coefficient was .955 and based on the sub modules and activities was .934. This proves that the CRM-CIP has high content validity and therefore is suitable to be implemented on the university students that have low or moderate level of career readiness.

Keywords: career readiness, career module, Career Readiness Module-Cognitive Information Processing (CRM-CIP), content validity

1.0 Introduction

The career development of the university students in this 21st century emphasizes technological skills of the graduates’ knowledge, skills and the ability to fulfill the needs of the job market (Othman, 2016). The job market needs graduates who are competent and skilled in their respective field (Ismail, 2012; Ishak, Ismail, & Robiah, 2008; National Higher Education Research Institute, 2003). Thus, the graduates who are required to meet the needs of the market need to be evaluated regarding their ability to secure a job after graduation. The benchmark of the universities in producing competent and highly skilled graduates will influence the nation’s policy (Zailan, 2007). Based on the current situation, it was admitted and confirmed that the produced graduates lack in knowledge and skills required by the job market (National Higher Education Research Institute, 2003). The issues regarding jobless graduates and graduates who are still looking for jobs became an obstacle for the universities and the industry players, hence they have to find a solution together (Zaini, 2009).

In the efforts of increasing the marketability of the graduates, the universities have played their roles by providing counselling and guidance services such as career guidance and counselling, career carnivals, career workshops, and other career development programs (Zailan, Amla, Norzaini, Ramlah, Rohana, Hanizah Hamzah, Mohd Izwan & Zaleha, 2013). However, the remaining question is that how far the current programs are able to increase the students’ career readiness? At the same time, Malaysia is no exception in introducing few related policies such as the National Graduates Employability Plan 2012 – 2017 that aims to ensure that the focus is given in provision of trainings, knowledge and skills appropriate with the need of the job market (Ministry of Higher Education in Malaysia, 2012). Following that, the challenges faced by the universities in this 21st century are seen as the best platform to provide trainings and produce graduates who are knowledgable, skilled and capable of fulfilling the need of knowledge based economy (Carnevale, 2013).

Past studies related to development and implementation of modules as one of the suitable intervention implemented in order to overcome the issue of students’ career development such as Modul Penyesuaian Pemikiran Kerjaya (Nur Liyana, 2016); Modul Perkembangan Kerjaya Bersepadu (Sidek, 1992); Modul Program Maju Diri (Jamaludin, 2002); Program Ekplorasi Kerjaya (Lau Poh Li, 2010); and Modul Penyusuanan Pemikiran Kerjaya (Nur Liyana, 2016). Meanwhile in abroad, studies related to the effectiveness of the career interventions were studied by Kleiman, Gati, Peterson, Sampson, Reardon & Lenz (2004); Hirschi & Lage, 2007; Scott & Ciani, (2008); Hirschi & Läże, (2008); Piaivandy, Bullock, Reardon & Kelly (2008) Hirschi & Läže, (2008b); Tarigan & Wimbarti, (2011); Koivisto & Vinokur, (2011); Sidropoulou-Dimakakou, Mylonas, Argyropoulou, & Tampuri (2012); Thrift, Ullkaheth, Reardon & Peterson, (2012); Perry (2012); Essig & Kelly (2013);Tirpak & Schollesser (2013)
Dahlen & Nicholson (2014); Brooks (2014); Mc Dow & Zabrucky (2015); Cheng & Jin (2015); Taylor & Hooky (2015), and Chiesem Massie & Gugielmi (2016). These studies showed that the usage of modules or career interventions produced positive impact on the studied variables.

### 2.0 Literature Review

#### Career Readiness

Past studies found that undergraduate students have low and moderate career readiness (Maznizam & Abdullah, 2013; Zalizan et.al., 2013; Yon, Joeng, & Goh, 2012; Kaur, 2012; Hughes, 2011; Mansor & Tan, 2009; Dybwad, 2009; and Salami, 2008). Career readiness is a predicting factor of the higher education students’ ability in preparing themselves with systematic career planning and explorations. Career readiness is influenced by the individual’s ability to make suitable career choices by considering factors that influence career development such as family, organization, social and economy (Sampson, McClain, Musch, & Reardon, 2013; Reardon, Lenz, Sampson, & Peterson, 2012, 2006).

The ability to make career decisions are related to the career thoughts that involve feelings, thinking, attitude, and expectations of beliefs (Bullock-yowell, Chason, Sampson, Lenz, & Reardon, 2013). Disfunctionality of the career thoughts is the non-functioning of the individual’s thinking that will affect their ability to solve problems and make career decisions. Thus, identifying the negative career thoughts can help in planning suitable intervention strategies (Andrews et al., 2014; Sidiropoulou-Dimakakou et al., 2012; Thrift, et al., 2012). The concept of self-efficacy is defined as the individual’s ability to justify their ability in order to arrange and implement needed action plan to achieve their aim. It is not only about possessing the career-related skills and knowledge, but also the ability to contemplate about what needs to be done based on the possessed knowledge and skills (Bandura, 1986). Self-efficacy functions as the regulator that involves processes like thinking, motivation, affective and physiology (Betz & Luzzo, 1996). Therefore, dysfunctional career thoughts and career self-efficacy are elements that can measure the level of career readiness in the process of career development and these elements can be learned and enhanced through a systematic method. According to Andrew et al. (2014) and Kristin (2009), the career self-efficacy variable has a relationship with dysfunctional career thoughts. An individual with high level of career self-efficacy is able to make career decision because he/she has positive career thoughts.

#### The Career Readiness Module-Cognitive Information Processing (CRM-CIP)

Career programs intend to provide career education to related students regarding the career world awareness, wide orientation for jobs, deep exploration on selected groups, career readiness and understanding of the economic system where job is a part of it and a place for all the students (Brown, 2007). Module is defined as a complete set and a planned free unit in the learning activities to help students achieve the established objectives (Goldschmid & Goldschmid, 1972). Meanwhile, Russell (1974) defined module as a teaching package related to a concept of subject. Usage of the modules as an intervention in career programs is a structured and planned approach.

The basic assumptions of the CIP theory was based on the cognitive theory which emphasizes the aspects of problem solving and making career decisions; understanding the positive and negative effects on their meta-cognitive in the context of problem solving and making career decisions; and the basic concept of interaction design to increase skills in solving career problems that are influenced by the disturbances of thoughts (Bertoch, Lenz, Reardon, & Peterson, 2013) and make decisions (Peterson, Sampson, Reardon & Lenz, 1996). In other words, this approach is a career development process that applies the model of career decision making (Paivandy et al., 2008). The uniqueness of this theory compared to other theories is that this theory focuses on cognitive, emotions, learning, decision making and practice (Reardon, Lenz, Sampson, & Peterson, 2011).

The CRM-CIP was outlined and developed based on three main CIP domains known as the pyramid of information processing domain in career decision making (Peterson et al., 1996). The development of the CRM-CIP was based on the three domains known as sub modul of knowledge, sub modul of decision making and sub modul of executive processing. As the result, thirteen activities have been developed based on the CIP information processing pyramid. The delivery of all the activities were categorised based on the processes that consisted of six units such as self-knowledge; occupational knowledge; engagement; understanding and identifying choices; decision making and action; refleaction and termination (Mohd Izwan, Sidek, Jamaludin & Wan Marzuki, 2016). Each unit is related to the following unit, in other words, all the units form a dynamic process. Table 1 shows the content of CRM-CIP in detailed summary.
Table 1: Summary of CRM-CIP Module Content

<table>
<thead>
<tr>
<th>Sub Modules</th>
<th>Unit</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Self-</td>
<td>1. Knowing</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>2. SWOT Analysis</td>
</tr>
<tr>
<td></td>
<td>Occupational</td>
<td>3. Career Needs</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>4. Career Matching</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Engagement</td>
<td>5. Career Genogram</td>
</tr>
<tr>
<td></td>
<td>Understanding</td>
<td>7. Career Reflection</td>
</tr>
<tr>
<td></td>
<td>and Identifying</td>
<td>8. My Career</td>
</tr>
<tr>
<td></td>
<td>Choices</td>
<td>9. Scaling</td>
</tr>
<tr>
<td></td>
<td>Decision</td>
<td>10. My Way</td>
</tr>
<tr>
<td></td>
<td>Making and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Action</td>
<td></td>
</tr>
<tr>
<td>Executive</td>
<td>Reflection</td>
<td>11. My Promise</td>
</tr>
<tr>
<td>Processing</td>
<td>and Termination</td>
<td>12. Magic Mirror</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. My Career Decision</td>
</tr>
</tbody>
</table>

Research objective

In general, this research intended to measure the content validity and reliability of CRM-CIP. The specific objectives of this research were:
1. To determine the content validity of CRM-CIP as overall.
2. To determine the content validity of CRM-CIP for each sub module and activity.

3.0 Research Methodology

This research used the descriptive research design, where the expert consensus percentage value and module’s content validity coefficient as well as reliability coefficient were obtained using the Alpha Cronbach coefficient internal validity. The content validity of the module was determined through expert consensus evaluation which consisted of eight experts that were appointed based on criteria such as have experience in module development, teaching, written articles related to module development, given lectures related to module development, developed and implemented module in the university setting. Five of the experts were appointed among lecturers of University of Malaya (UM), University of Technology Malaysia (UTM), Universiti Perguruan Sultan Idris (UPSI) and Institut Pendidikan Guru (IPG). Meanwhile three more experts were appointed among counselling practitioners in National University of Malaysia (UKM).

A complete draft of the CRM-CIP module with a copy of the content validity questionnaire and letter of appointment were given to all the appointed experts. The data were analysed descriptively to obtain the percentage value of expert consensus and the content validity coefficient. The determination whether the content validity is good or not was based on the opinions of Waheed (1981) and Sidek & Jamaludin (2005), who stated that an achievement of 70% and above is deemed high achievement. On the contrary, if the score is below 70%, it is deemed that the content validity is not good. Apart from that, the experts also gave their opinions and comments in order to improve the content of the module.

4.0 The Measurement Instrument

The content validity questionnaire used the modified questionnaire of Jamaludin (2002) adapted from Russell (1974). The questionnaire consisted of five items which were the module content is suitable for targeted population, the module content can be implemented successfully, the module content can increase career readiness and the module content can modify the career thoughts. The answer choices were five point likert scales with (5) strongly agree, (4) agree, (3) not sure, (2) disagree, dan (1) strongly disagree. The content validity questionnaire for each of the sub modules and activity used the format put forward by Mohamad Aziz Shah (2010). That questionnaire was modified according to the needs of the CRM-CIP which has three sub modules of knowledge, decision making and executive processing. All the three sub modules were arranged based on the activities that are provisioned in each of the sub modules. Answer choices used the semantic scales of 0 (strongly disagree) to 10 (strongly agree).

5.0 Research Findings

The Overall Content Validity of CRM-CIP

The expert group have done the evaluation on the overall content validity of the module using the questionnaire developed by Jamaludin (2005) adapted from Russell (1974). Table 2 presents the expert consensus findings which shows that the minimum percentage obtained was 90% for the module content can be implemented successfully item and the maximum percentage obtained was 100% for the module content can increase career readiness of the students. Thus, overall score obtained for all the items was 95.5% which equals to coefficient of content validity .955 > .70 and proved that this module has high and good content validity.

Table 2: Content Validity of CRM-CIP

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Percentage</th>
<th>Content Validity Coefficient</th>
<th>Expert Opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The module</td>
<td>97.5%</td>
<td>.975</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
content is suitable for targeted population

2. The module content can be implemented successfully.

3. The module content is appropriate with the time allocated.

4. The module content can increase the career readiness of students.

5. The module content can modify the career thoughts of students.

Total Overall 95.5% 955 Accepted

Analysis of Sub Modules and Activities Content Validity

The expert group have evaluated the content validity of sub modules and activities using the questionnaire modified from Mohamad Aziz Shah, (2010). Table 3 shows the content validity of sub modules and activities. The findings showed that the content validity coefficient was .933 which is above the minimum value of .70. The comparative analysis according to sub categories showed that value of knowledge sub module was .922, the decision making sub module was .932 and the executive processing sub module obtained the highest coefficient value of .962. When compared based on the activities, My Career Choices and Magic Mirror acquired the highest validity coefficient of .975. In the mean time, the activity that obtained the lowest value of .90 was Career Genogram and Career Barriers. This shows that there is no existing coefficient value differences between the maximum and the minimum, the overall value of CRM-CIP based on the evaluation done by the experts on each sub modules and activities showed that the expert consensus was above the minimum value of .70 these findings showed that the CRM-CIP has high and good content validity.

<table>
<thead>
<tr>
<th>Sub Modules and Activities</th>
<th>Percentage (%)</th>
<th>Content Validity Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Sub Module</td>
<td>92.20</td>
<td>.922</td>
</tr>
<tr>
<td>Activity 1: Knowing Yourself</td>
<td>93.75</td>
<td>.937</td>
</tr>
<tr>
<td>Activity 2: SWOT Analysis</td>
<td>92.50</td>
<td>.925</td>
</tr>
<tr>
<td>Activity 3: Career Needs</td>
<td>91.25</td>
<td>.912</td>
</tr>
<tr>
<td>Activity 4: Career Matching</td>
<td>91.25</td>
<td>.912</td>
</tr>
<tr>
<td>Decision Making Sub Module</td>
<td>93.21</td>
<td>.932</td>
</tr>
<tr>
<td>Activity 5: Career Genogram</td>
<td>90.00</td>
<td>.900</td>
</tr>
<tr>
<td>Activity 6: Career Barriers</td>
<td>90.00</td>
<td>.900</td>
</tr>
<tr>
<td>Activity 7: Career Reflection</td>
<td>91.25</td>
<td>.912</td>
</tr>
<tr>
<td>Activity 8: My Career Choices</td>
<td>97.50</td>
<td>.975</td>
</tr>
<tr>
<td>Activity 9: Scaling</td>
<td>93.75</td>
<td>.937</td>
</tr>
<tr>
<td>Activity 10: My Way</td>
<td>96.25</td>
<td>.962</td>
</tr>
<tr>
<td>Activity 11: My Promise</td>
<td>93.75</td>
<td>.937</td>
</tr>
<tr>
<td>Executive Processing Sub Module</td>
<td>96.25</td>
<td>.962</td>
</tr>
<tr>
<td>Activity 12: Magic Mirror</td>
<td>97.50</td>
<td>.975</td>
</tr>
<tr>
<td>Activity 13: My Career Decision</td>
<td>95.00</td>
<td>.950</td>
</tr>
</tbody>
</table>

| Total Value of CRM-CIP     | 93.36          | .933                        |

6.0 DISCUSSION

The basis of CRM-CIP development were the literature analysis related to career readiness, the population of higher education and suitability of career theories. The CIP theory was among the theories appropriate to be used as the theoretical framework in module development because its core, concept and technique explain the students’ career readiness especially college and university students. Apart from that, this theory also put forward the concept or cluster that can be translated into implementation of the intervention (Reardon et al., 2012). There were a total of thirteen activities that were developed and this contributes towards exploration of new knowledge in the implementation of career interventions that are suitable with the population.

According to Sidek and Jamaludin (2005), a good module should measure three main aspects which are content validity, reliability and effectiveness. All these three aspects could increase the strength and quality of the module. This research found that CRM-CIP, sub modules and activities have high content validity value. This finding is parallel with the study done by Nur Liyana et al. (2014); Jasmi et al. (2013); Amla et al. (2013); Lau Poh Li (2010); Mohd Ali (2010); Abdul Hanid (2007); and Jamaludin (2002) that also utilised the similar content validity testing procedures as this research.

Therefore, the content validity analysis for the overall module and sub modules are high and accepted, which implies that the CRM-CIP can be used and tested for its effectiveness on the university student population. With the establishment of this module, it can contribute towards career intervention studies at the level of Higher Education Institutions.
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kerjaya dan situasi vokasional dalam kalangan pelajar tingkatan empat. Tesis Doktor Falsafah yang tidak diterbitkan. Universiti Perguruan Sultan Idris, Tanjong Malim Perak.


