



**Development of
A Career Development Competency Inventory
for College Students**

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Presenters

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Agenda

- Introduction
- Process and Methods
- Results
- Discussion and Limitations

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Introduction

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National Career Development Guideline (NCDG; USA, 2003)

- **3 Domains & 11 Goals (4 for PS, 2 for ED, 5 for CM)**
 - **Personal Social Development (PS)**
 - GOAL PS1 Develop understanding of self to build and maintain a positive self-concept.
 - **Educational Achievement and Lifelong Learning (ED)**
 - GOAL ED1 Attain educational achievement and performance levels needed to reach your personal and career goals.
 - **Career Management (CM)**
 - GOAL CM1 Create and manage a career plan that meets your career goals.
- **3 Indicators (Learning stages; based on Bloom's Taxonomy)**
 - Knowledge Acquisition (K) / Application (A) / Reflection (R)
 - PS1.K2 **Identify** your abilities, strengths, skills, and talents.
 - PS1.A2 **Demonstrate** use of your abilities, strengths, skills, and talents.
 - PS1.R2 **Assess** the impact of your abilities, strengths, skills, and talents on your career development.

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The Blueprint for Life/Work Design (BLWD; Canada, 2006)

- **3 Content Areas & 11 Competencies**
 - Personal Management, Learning and Work Exploration, Life/Work Building
- **4 Developmental Levels**
 - Early Years, Middle Years, Senior Years, Post-secondary and Adult Populations
- **4 Performance indicators**
 - **Acquisition:** Acquiring knowledge (identify, discover)
 - **Application:** Experiencing acquired knowledge (explore, demonstrate)
 - **Personalization:** Integrating acquired and applied knowledge (deepen understanding of, explore the effect of)
 - **Actualization:** Striving towards full potential (use, express, appreciate)
- Example
 - Competency 5.3: Locate, interpret, evaluate and use life/work information.
 - Indicator 5.3.1: Explore the educational requirements of various work roles.
 - Local Standard: Grade Nine students will correctly describe the educational requirements for five work roles of interest to them.

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Australian Blueprint for Career Development (ABCD; Australia, 2010)

- **3 Areas & 11 Competencies**
 - Personal Management, Learning and Work Exploration, Career Building
- **4 Phases (Developmental)**
 - Kindergarten-Primary, Middle, Senior/Post-Compulsory, Adults
- **4 Performance indicators**
 - Learners **ACQUIRE** and understand the required knowledge
 - They **APPLY** the knowledge, attitude or skill by putting it into action
 - They **PERSONALISE** their learning, and
 - They **ACT** upon that learning in creative ways.
- Example
 - Understand the importance of and the ways in which you can locate and use education and training information
 - Adopt behaviours and attitudes conducive to reaching personal, social, educational and professional goals
 - Assess the relevance of the career information resources you have used to your career information search
 - Improve strategies for locating, understanding and using career information

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Career Development Competencies Research in Korea

- Lim, et al. (2008)
 - Identified 3 areas and 11 competencies to integrate career education with other school subjects
- Lee, et al. (2010)
 - Identified 5 areas and 11 competencies for career education policy to educate creative talented students
- Jung & Lim (2013)
 - Developed a career development competency scale for adolescents: 3 areas and 9 competencies
- Lim & Jyung (2015)
 - Developed a career development competency inventory for middle school students: 3 areas and 8 competencies
- Yoon, et al. (2016)
 - Developed career development competency indicators for each level of students (elementary school, middle school, high school, vocational high school, 2-year college, 4-year university): 4 areas and 10 subareas (for 4-year university)

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Need for the study

- In last 10+ years, previous studies identified and developed inventories to assess career development level in each area and competencies.
- However, most of them did not include “performance indicators” in the inventory nor suggested the level of performance of each competency.
- In this study, Career Development Competency Inventory (CDCI) was developed for 2-year college students
 - based on national level career development competency model
 - with items to assess performance level of each competency

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Process/Methods

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Inventory Development Process

Literature Review

To determine competency model and develop items, a group of career development professionals reviewed mainly

- National Career Development Guideline (NCDG; USA, 2003)
- The Blueprint for Life/Work Design (BLWD; Canada, 2006)
- Australian Blueprint for Career Development (ABCD; Australia, 2010)

Item development

- Items developed by 1 GCDF instructor and 7 GCDFs
- Items were reviewed by 2 professors who have career education experience
- Items were reviewed by 42 students in 2-year college: All items were found to be valid (one of complains was “too many items”)

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Career Development Competency Inventory (CDCI)

3 Domains and 11 competencies

Self Management

- C1: Building and maintaining positive self-concept
- C2: Building and developing positive relationships with others in every life domain
- C3: Coping with changes from every life domain positively and proactively
- **Learning and Work Exploration**
 - C4: Participating in lifelong learning to achieve career goals
 - C5: Exploring and using career information proactively
 - C6: Integrating social-economic changes into your career plans
- **Life/Work Building and Management**
 - C7: Mastering employability skills to obtain, maintain and advance your employment
 - C8: Making realistic and rational career decisions
 - C9: Maintaining Work-Life balance and accountability of your own life
 - C10: Confronting and eliminating your stereotype, prejudice and discrimination in work and life domains
 - C11: Maintaining accountability of your career development in a whole-life perspective

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Career Development Competency Inventory (CDCI)

Performance levels are

1. Acquisition – Level 1
2. Application – Level 2
3. Personalization – Level 3
4. Actualization – Level 4

Item examples

- C1-L1: I can describe myself with two and more examples regarding my characteristics (e.g. value, interest, personality, strengths, etc.)
- C1-L2: I can write a 1-page essay to explain how my characteristics (knowledge, skills, attitudes, vocational interest, values, belief) impacted my recent important decision-making regarding my career (e.g. school advancement, major choice, graduation, job or part-time job choice, employment, certification, leisure) and how the decision is currently affecting me.
- C1-L3: After taking career assessments (interest, aptitude, value, personality, readiness, etc.) and its interpretation counseling, I can write a 1-page essay to describe my detailed and integrated characteristics.
- C1-L4: I can write a 1-page essay on how to develop my strength from my characteristics (belief, values, knowledge, ability, skills)

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Analysis

- SPSS for Internal consistency and Correlations among domains
- AMOS for Confirmatory Factor Analysis (CFA)

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Results

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Participants

- 384 students in 2 different departments in a 2-year college in Seoul, Korea
 - Description of participants

		Frequency	Percent (%)
Gender	Male	166	43.2
	Female	198	51.6
	No response	20	1.3
Grade (Year)	First year	205	53.4
	Second year	174	45.3
	No response	5	5.2
Total		384	100.0

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Results

Internal consistencies

Areas	Cronbach's α
Self Management	.951
Learning and Work Exploration	.956
Life/Work Building and Management	.978
Total	.986

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Results

Correlations among competencies

Domains	competencies	Self Management			Learning / Work			Life/Work Building			
		1	2	3	4	5	6	7	8	9	10
Self Management	1. Positive Self-concept	-									
	2. Positive relationships	.750	-								
	3. Coping with changes	.730	.767	-							
Learning and Work Exploration	4. Lifelong learning	.531	.602	.695	-						
	5. Exploring and using career information	.568	.642	.700	.792	-					
	6. Integrating social-economic changes	.600	.698	.661	.657	.740	-				
	7. Mastering employability skills	.567	.619	.685	.750	.794	.712	-			
Life/Work Building and Management	8. Making career decisions	.625	.696	.728	.654	.760	.763	.761	-		
	9. Work-Life balance	.624	.677	.688	.597	.687	.721	.711	.824	-	
	10. Confronting and eliminating discrimination	.591	.678	.655	.513	.628	.732	.674	.697	.772	-
	11. a whole-life perspective	.552	.561	.620	.592	.648	.593	.767	.668	.692	.649

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Results: CFA

D: Domains
 C: Competencies
 L: Levels of performance
 L1: Acquisition
 L2: Application
 L3: Individualization
 L4: Actualization

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Results: CFA

	estimate	Standard error	Critical ratio	Standardized estimate
C3 ← D1	1.000			.992***
C2 ← D1	.615	.066	9.345	.966***
C1 ← D2	.667	.069	9.655	.884***
C4 ← D2	1.000			.918***
C5 ← D2	1.072	.108	9.893	.953***
C6 ← D2	.972	.113	8.579	.905***
C7 ← D3	1.000			.920***
C8 ← D3	1.097	.096	11.463	.951***
C9 ← D3	1.146	.100	11.510	.896***
C10 ← D3	.944	.096	9.811	.865***
C11 ← D3	.980	.091	10.739	.878***

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Results: CFA

	estimate	Standard error	Critical ratio	Standardized estimate		estimate	Standard error	Critical ratio	Standardized estimate
L1 ← C1	1.000			.961***	L1 ← C7	1.000			.998***
L2 ← C1	1.074	.113	9.487	.957***	L2 ← C7	.951	.082	11.586	.911***
L3 & L4 ← C1	1.124	.117	9.611	.991***	L3 ← C7	.993	.086	11.525	.963***
L1 ← C2	1.000			.832***	L4 ← C7	1.145	.090	12.789	.901***
L2 ← C2	1.093	.125	8.776	.959***	L1 ← C8	1.000			.979***
L3 & L4 ← C2	1.420	.147	9.650	.972***	L2 ← C8	1.097	.076	14.406	.993***
L1 ← C3	.600	.088	9.281	.837***	L3 & L4 ← C8	1.158	.084	13.768	.973***
L2, L3 & L4 ← C3	1.000			.881***	L1 ← C9	1.000			.956***
L1 ← C4	1.000			.907***	L2, L3 & L4 ← C9	.989	.069	14.300	.993***
L2 ← C4	1.195	.117	10.195	.990***	L1 ← C10	1.000			.832***
L3 & L4 ← C4	1.100	.111	9.925	.934***	L2, L3 & L4 ← C10	1.160	.101	11.443	.986***
L1 ← C5	1.000			.973***	L1 ← C11	1.000			.962***
L2 ← C5	1.165	.099	12.469	.990***	L2 ← C11	1.054	.082	12.835	.951***
L3 & L4 ← C5	1.352	.104	12.945	.993***	L3 & L4 ← C11	1.101	.084	13.078	.884***
L1 ← C6	1.000			.880***					
L2, L3 & L4 ← C6	1.458	.138	10.528	.993***					

***p<.001

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Results: CFA

Indices	Results	Criteria	Results
CMIN/p-value	16733.214/.000	-	-
CMIN/DF	1.858	-	-
SRMR	.063	< .08	Good
CFI	.771	> .90	Not good
RMSEA	.047 (C.R: .046-.048)	<.05 (close fit) < .08 (reasonable fit) < .10 (mediocre fit)	Good

The results of CFA did not show a good fit to the data, however, it could be marginally acceptable considering its initial trial and its complex model (three-level).

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Discussions / Limitations

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- ### Discussions / Limitations
- It is meaningful to confirm that the development of an inventory including performance indicators, like CDCI, is possible.
 - The results of the study indicates that the structure of CDCI is acceptable.
 - However, we need to review (or revise) the structure and items of CDCI considering the poor results of some fit indices such as CFI.
 - Too long and many items should be revised to be utilized in practice.
 - The participants in this study were all 2-year college students in one college. Need to be cautious with generalization of the study to other populations.

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any questions?

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