

Examining Common Content Knowledge of Korean Preservice Teachers in Soccer

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Common Content Knowledge (CCK)

- The CCK knowledge
 - To perform a sport or activity
 - Knowledge of rules, safety, etiquette, techniques, and tactics (Ward, 2009).
- Significant and essential knowledge for teaching effectiveness
(Kim et al., 2018; Ward & Ayvazo, 2016)
- The National Standards for Initial Physical Education Teacher Education
 - Standard 1.a.: *“Candidates will describe and apply CCK for teaching preK-12 physical education”* (SHAPE America, 2017, p.1).

CCK Development in PETE

- Physical Education Teacher Education (PETE) programs
 - As critical sites for the teaching of CCK
 - To demonstrate preservice teachers' CCK levels
- Problems:
 - Allocation of Movement Content Courses: Only about 10% of the total PETE credit hours in USA (Kim et al., 2015)
 - Few valid and reliable CCK tests
 - One CCK test for tennis in the United States (Tsuda et al., in press)

CCK Tests-Culturally Specific

- Each Country:
 - Different educational contexts & different expectations for teachers.
- Importance of developing CCK tests for PETE in different countries
 - The scope of content knowledge is contextually specific.
- He et al. (2018): the development of soccer tests in China,
 - Initially used CCK test questions developed in the United States: inadequate for Chinese physical educators
 - Developed test questions that covered the content taught in secondary physical education in China: more in-depth in the content

International perspectives

Development of common content knowledge (CCK) in physical education teacher education programs in South Korea



Korean PETE curriculum: Strong Emphasis on Activity Content Knowledge

PETE Programs in KOREA

- At least 21 credit hours of activity classes required in Korea
 - 1credit X21 sports/activities
- ⇒ Skill acquisition and understanding & application of rules and techniques in game situation

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PETE Programs in USA

- 8 or 15 credit hours of activity courses in USA
- ⇒ Emphasizing educational aspects of individual and team sports

Korean PETE curriculum: Strong Emphasis on Activity Content Knowledge

- Curricular comparison between 20 Korean PETE programs vs 22 US PETE programs (Lee, Ko, & Lee, 2014)

Table 3. Distribution of Activity Courses in PETE Curriculum in Korea and USA

Country	Korea			USA		
Activity Courses	Mean Credit Hours (SD)	Proportion within Graduation Hours (%)	Proportion within Major Hours (%)	Mean Credit Hours (SD)	Proportion within Graduation Hours (%)	Proportion within Major Hours (%)
Minimum Required Activity Courses	7.95 (7.3)	5.8	12.0	10.3 (4.7)	8.4	17.8
Maximum Required Activity Courses	39.1 (15.7)	28.5	57.3	10.3 (4.7)	8.4	17.8



Purposes of this study

Teacher candidates' CCK development in PETE programs has been rarely assessed in Korea.

- How do PETE students' soccer CCK differ throughout their PETE programs?
- Do entering freshmen with more soccer playing experiences have a better CCK score?
- What factors do influence entering freshmen's soccer CCK?

Methods

- A Cross-Sectional study
 - 11 PETE programs in Korea
 - Participants at four measurement points: Total N=911 (F= 225 , M= 686)
 - : 318 entering freshmen (F= 74; M= 244), age (M= 20.29 yrs)
 - : 251 the end of freshmen (F= 68; M=183), age (M= 21.92 yrs)
 - : 174 the end of sophomore (F= 48; M=126), age (M= 23.30 yrs)
 - : 168 the end of junior (F= 35; M=133), age (M= 24.38 yrs)
- * No seniors invited due to student teaching experiences

Data Collection

- Data: Soccer CCK test
 - Developed and validated (Lee et al., 2018)
 - 30 multiple choice questions: soccer rules, history, etiquette, safety, techniques, and tactics
- Data Collection
 - To complete soccer CCK test at participants' institution



Data analysis



- Scores were converted to the percentage.
- Descriptive statistics:
 - Means and Standard deviations
- Inferential statistics:
 - ANOVAs and Multilinear Regressions

Descriptive Results for Research Q #1

Soccer CCK Measures	N	Mean (%)	SD
Entering Freshmen	318	67.4	16.4
The End of Freshmen	251	65.8	17.3
The End of Sophomores	174	67.7	18.1
The End of Juniors	168	65.0	19.5

Statistical Results for Research Q#1

- An ANVOA was used to assess differences of the PETE students' CCK at the four measurement points.
- The analysis showed no statistical difference for the four groups' CCK measures, $F = 1.023 (3)$ and $p = 3.82$.



Descriptive Results for Research Question #2 & 3

Entering Freshmen's Soccer CCK Measures (n = 318)

Predictors		M%	SD
Gender	Female (n = 74)	53.5%	15.6
	Male (n = 244)	71.6%	14.3
Soccer Playing Experience	No experience (n= 113)	58.4%	18.0
	1 year (n = 22)	62.7%	18.6
	2 years (n = 28)	71.4%	12.3
	3 years (n = 28)	73.2%	10.1
	More than 4 years (n = 127)	74.0%	12.2

Statistical Results for Research Q#2

- An ANOVA was used to assess differences of the entering freshmen's CCK measures ($n = 318$) between the soccer-playing experience groups.
 - The analysis showed a statical significance, $F = 18.914 (4)$ and $p = .00$.
- The Games-Howell post-hoc test results indicated that the freshmen who had 1~4 years playing experience before entering their PETE programs achieved higher CCK than those who had never played soccer before ($p = .00$).



Statistical Results for Research Q#3

- A multilinear regression was conducted on the entering freshman group ($n = 318$) to determine if gender, soccer-learning experience, soccer-playing years, self-report soccer-CK level, and self-reported soccer-playing level predicted their CCK.
- The analysis showed gender (Beta = $-.324$ and $p = .00$) and soccer-playing years (Beta = $.186$ and $p = .01$) did significantly predict factors of the freshmen's CCK.

Conclusions

- CCK scored among entering freshmen would be considered a failure in the Korean university system.
- Difference in CCK scores among entering freshmen:
 - Having at least one year soccer playing experience differentiated teacher candidates' CCK in soccer.
 - Significant predict factors of the entering freshmen's CCK were gender and years of soccer-playing
- Little improvement in soccer CCK throughout their PETE programs

Implications



To support preservice teachers' CCK development in PETE programs

- The content of activity courses offered by Korean PETE program should be aligned with the content to be taught in K-12
- Teacher educators should consider using content packet
 - Includes safety and game rules/etiquettes/techniques/tactics as well as valid CCK tests in learning CCK within the curriculum

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Thank You