

International Physical Education Teacher Education Physical Activity Content Knowledge Study

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Background

- If one accepts that CCK and SCK represent specific CK domains, then the relevant question becomes:
 - ***Are these knowledge domains taught in teacher education programs?***
- Research in mathematics, reading, and science has shown conclusively that merely knowing CCK is insufficient to teaching the content in ways that result in student learning the content and also developing conceptual understanding of the content.
 - (Krauss et al. 2008; Kleickmann et al 2013; Mewborn, 2001; Ward, 2009).

How is this CCK and SCK acquired in teacher education?

- Most common rationale:
 - To teach an activity, you must be able to perform the activity, and this is how you come to *know* the activity
- Teacher Education programs design content classes where teachers perform
- Knowledge gained from performance **is only small part of the content knowledge need to teach the activity**

- Teacher Education programs ought to be focusing on both the performance and the teaching of content

Our preliminary work?



- All universities in South Korea with a PE program (N =28).
- All universities in Ohio with a PE program (N=24)
- Examined course content using syllabi
- Predominate focus in both settings:
 - Mostly CCK, little SCK
 - Korean universities (17 CCK courses) much more CCK than Ohio universities (1-7 CCK courses)



(Ward, Li, Kim & Lee, 2012)

Our primary research questions



1. What percentage of the undergraduate curriculum in each country do content classes represent?
2. What is the relationship between CCK and SCK in content classes of in each country?
3. What is the relationship among the four domains of CK in the content classes in each country?
4. What are the perspectives of the program coordinators in each country relative to the purposes of content classes?

Our Study Locations

USA

WALES

ENGLAND

BELGIUM

TURKEY

CHINA



Instruments and Strategies



- Survey
 - Sent email to program coordinators
- Syllabi
 - Physical activity content syllabi requested of program coordinators
- Questioning
 - Clarifications sought via email

PETE programs in the United States



■ **Original Intent**

- Two universities per state with PETE programs
 - First categorized by size of program (<19 or >20)
 - One program purposely selected from each group

■ **Reality**

- Contact 120+ universities
- 26 universities responded
- Inequitable distribution by geographical location and size of the program
- Despite being hounded by us, we received very few responses

4-Year Undergraduate Program in USA



- Percent of Curriculum devoted to content (mean: 10.4%, range 4-17%)
 - 3 credit hours configurations: 50%
 - 2 credit hours configurations: 34.6%
 - 1 credit hours configurations: 15.4%
- The average of 4 content areas (range 1-17) in each content course per semester was covered in programs we examined
- The average of 13.4 hours (range 2-45) was spent in each content area
- Individual and team sports, dance
- No common curriculum

Chinese PETE programs



- **Original Intent**

- 88 universities across China with PETE programs
 - At least 50 students

- **Reality**

- Contact 100+ universities
- 14 universities responded
- Inequitable distribution by location and size
- For syllabi, too general to be able to categorize CK as CCK versus SCK

4-Year Undergraduate Program in China



- Percent of curriculum devoted to content 21-38%
- A major: Depth in Content Knowledge
 - Basketball
- Width: Competency in a variety of other sports
 - Volleyball, swimming, basketball, Soccer, Martial Arts, Gymnastics, Dance, table tennis, track and field, badminton, etc.

England & Wales PETE programs



■ **Original Intent**

- Contact all IHE's who offer UG Degree with QTS or UG Degree with PGCE in Physical Education

■ **Reality**

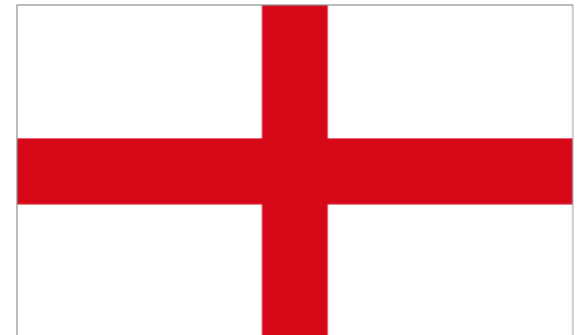
- Contacted Survey sent to 29 programs
 - 3 UG Degree with QTS
 - 26 UG Degree with PGCE
- Data from 7 programs
 - 1 UG Degree with QTS
 - 6 UG Degree with PGCE
- Inequitable distribution of data by route to ITT
- Despite being contacted by us multiple times, very few responses



4-Year Undergraduate Program in England and Wales



- Same system for Initial Teacher Training (ITT)
- Different routes to ITT
- Undergraduate degree with Qualified Teacher Status (QTS)
- Postgraduate leading to QTS
- Percent of Curriculum devoted to content 8-33% (mean 20.5%).



PETE programs in Turkey



- **Original Intent**

- 51 PETE programs in 50 universities across Turkey.

- **Reality**

- Contact- 50 universities
- 22 universities responded (43.1%)
- All universities apply similar PETE curricula except elective courses.
- Program size- large in all universities

4-Year Undergraduate Program in Turkey



- Percent of curriculum devoted to content 31.5%
- Compulsory sport/physical activity courses:
 - Artistic Gymnastics, Rhythmic Gymnastics, Basketball, Swimming, Track and Field, Outdoor Sports, Rhythm education and Dance, Team Handball, Soccer, Folk Dances, Volleyball, Fitness
- Universities additionally offer 2 elective sports/physical activity courses.



PETE programs in Belgium



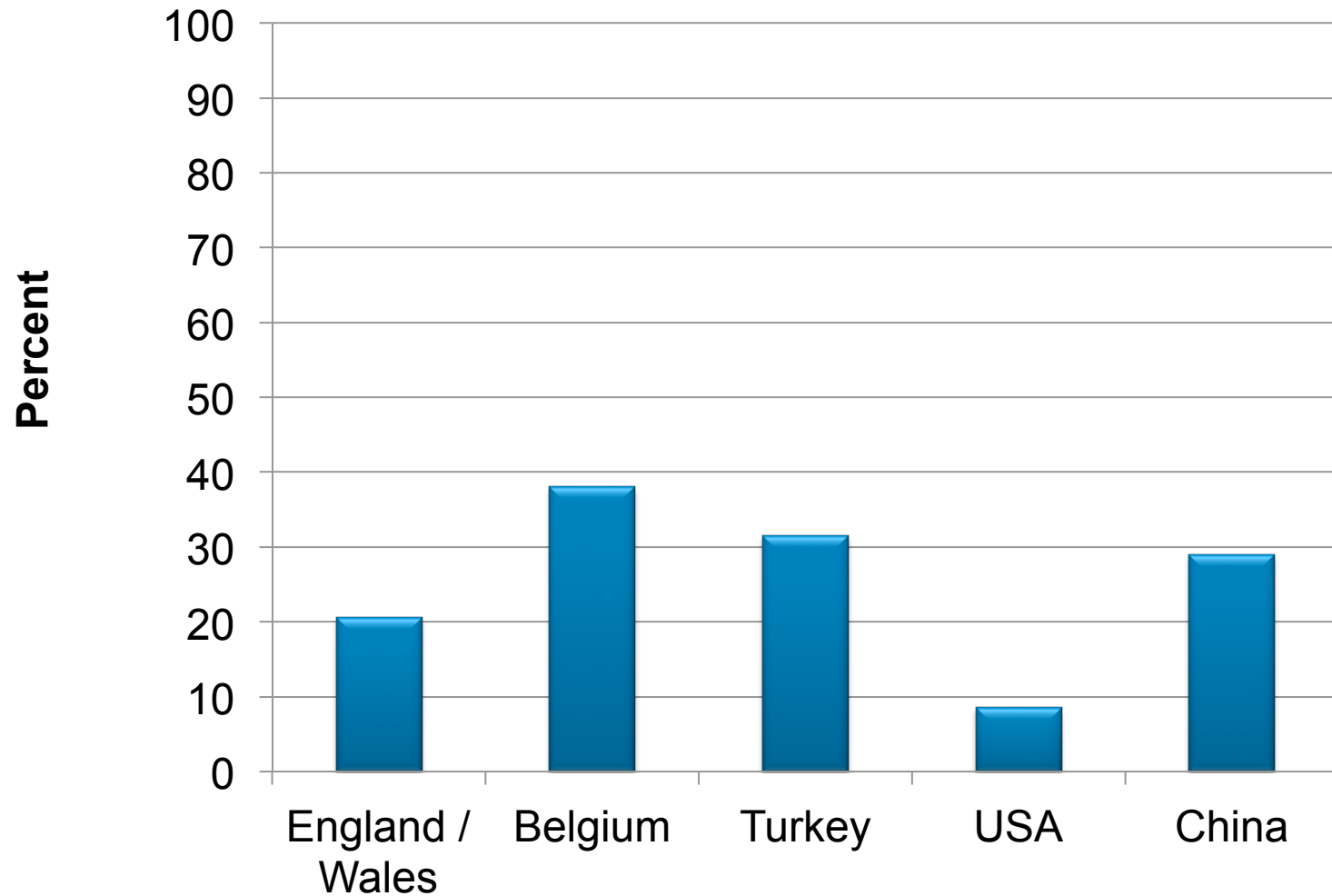
- **Original Intent**
 - To collect data from all institutions with PETE programs (n = 11)
- **Reality**
 - Full data received from 6 institution
 - Incomplete data from 3 institutions
 - Total response: n = 9

PETE programs in Belgium

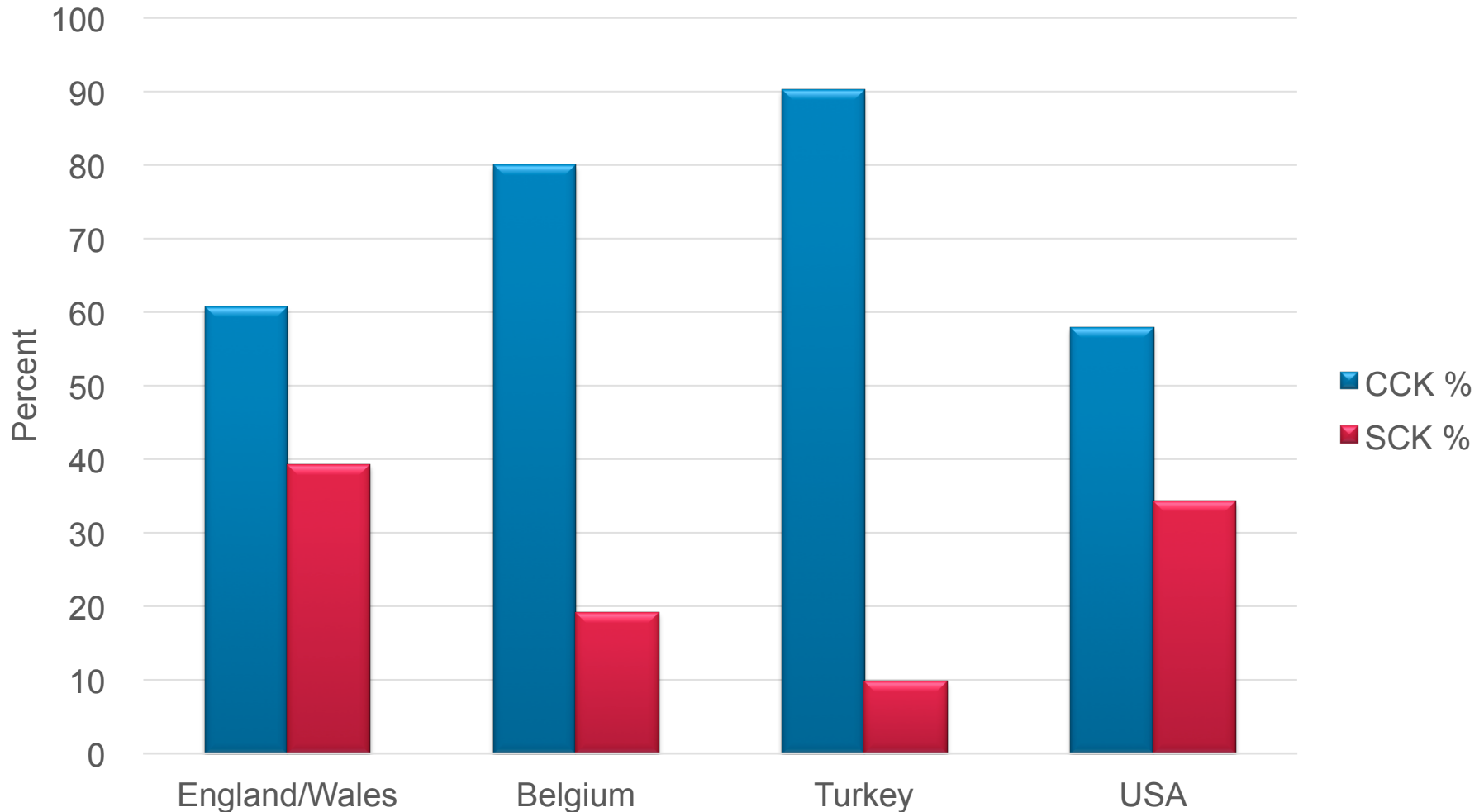


- Percent of curriculum devoted to content 38%
- Content covered:
 - Soccer, basketball, swimming, gymnastics, handball, track and field, dance, volleyball, self-defense, outdoor sports
- Large differences between institutions

Research Question 1: Content classes as a percentage of undergraduate curriculum in each country

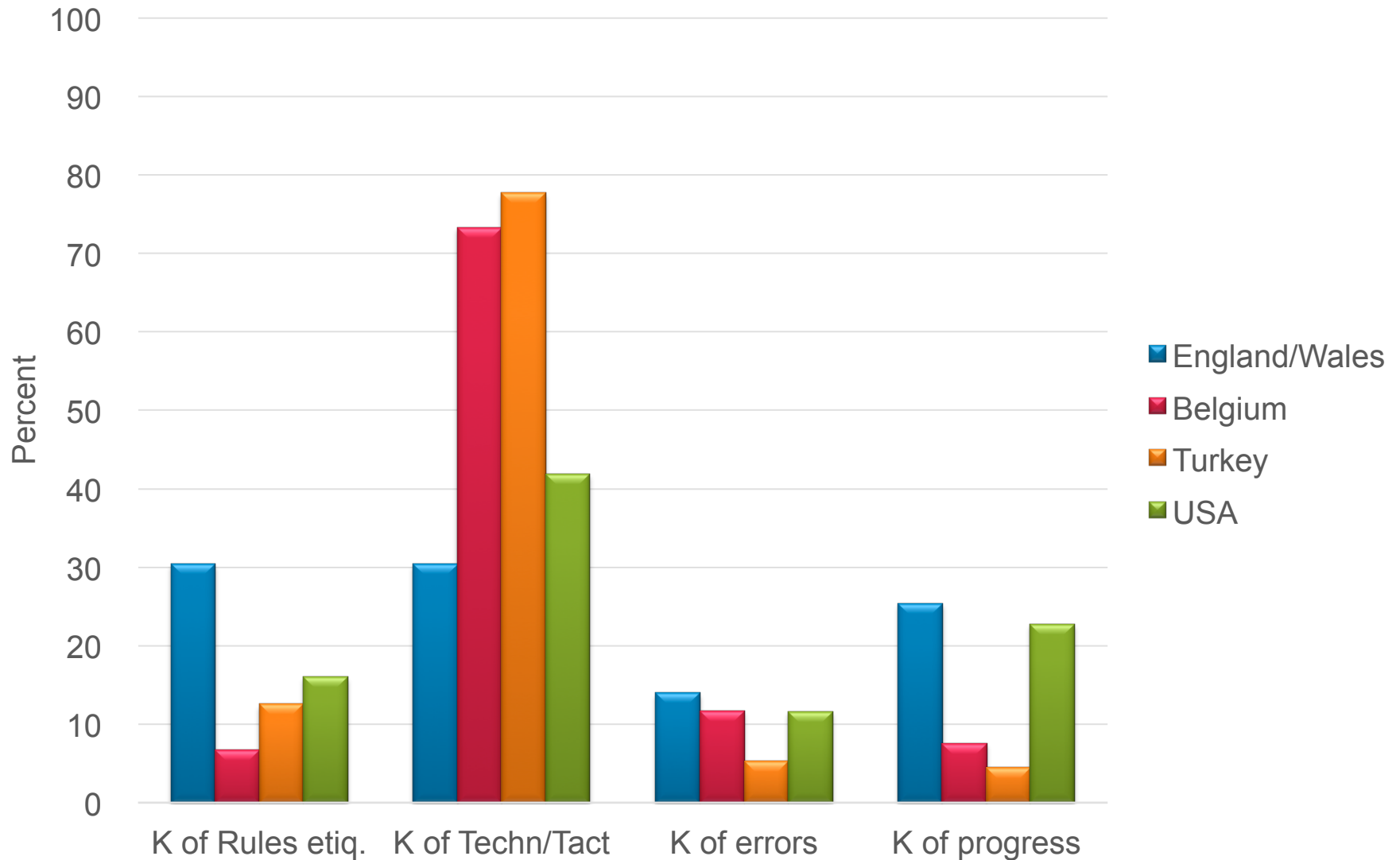


Research Question 2: Distribution of CCK vs. SCK in each country as reported in syllabi.



Note USA data included a third category

Research Question 3: Distribution of domains as reported in syllabi

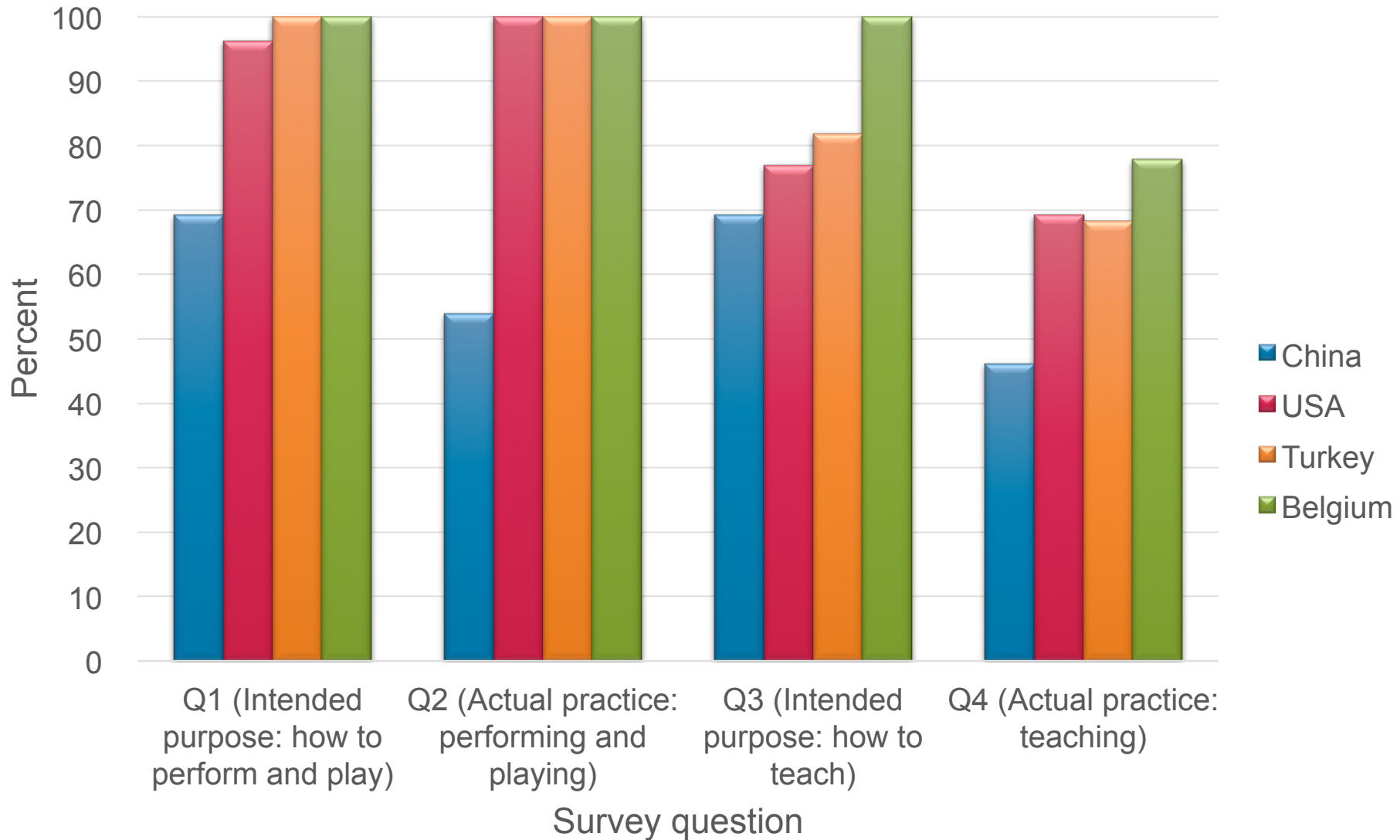


Questions for Program Coordinators:



- In our content classes a purpose of the class is to teach students in our teacher education program how to perform the sport or activity
- In our content classes students play or perform the content
- In our content classes, a purpose of the class is to teach students in our teacher education program how to teach the sport or activity.
- In our content classes students practice teaching the content.

Research Question 4: Perspectives of program coordinators in each country



Conclusions

- Despite our efforts, we have a limited sample from each country. As such we can say little about the representativeness of our sample for each country-with the exception of Turkey.
- **However, when we compare our findings across countries there is a strong commonality among the data and it is consistent with our previous findings on this topic in Ohio and South Korea (Ward et al., 2012).**
 - **That study reported on more than 90% of PETE institutions in Ohio and South Korea.**

Consistent Findings Across Countries

- **CCK is taught much more often in content knowledge courses than SCK** (Belgium, England, Turkey, Wales, USA –no data for China).
 - **The primary way CCK is obtained is by playing the game.**
- CCK domain of techniques and tactics is the where the predominate focus of CCK occurs and where the predominate focus of all content instruction occurs
- Both SCK domains (errors and tasks) are taught very minimally.

Consistent Findings Across Countries

- Universal agreement that CCK and SCK should be taught in content classes.
- In Belgium, England Turkey Wales and the USA perspectives of that happening do not match the realities reported in the syllabi.

Implications for PETE programs

- Examine where and how their students acquire SCK.
- Determine how well their students know CCK and SCK
- To determine what level of skill performance pre-service teachers need to have in order to teach a particular physical activity content?
- Examine ways to teach SCK be taught to pre-service teachers in PETE programs?
- Examine many content areas should be covered in PETE programs?
- Increase the percentage of the time devoted to content classes

Take Home Message

Are our pre-service teachers learning enough content in their teacher education programs to be effective at teaching the content?

- The Roslow Research Group (2009) in their review of physical education trends in K-12 schools in the United States reported that **37** different content areas are being regularly taught as reported by physical education teachers.
 - Based on the Roslow Research Group (2009) finding, our data showed that pre-service teachers in the USA **are learning only a small percentage of the content that they are likely to teach.**

THANK YOU
for listening!

