

A Cross-Cultural Investigation of the Use of Teaching Styles

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Teacher beliefs are a major influence on teacher actions. Because context influences beliefs, it was the purpose of this study to explore teachers' beliefs about Mosston's Spectrum of Teaching Styles from an international perspective. Over 1,400 teachers from 7 countries completed a survey related to their self-reported use of and beliefs about various teaching styles. Data suggested a shared core of reproduction teaching style use. The use of and beliefs about the production styles of teaching were more varied. Teachers' use of styles was significantly related to their beliefs about the styles.

Key words: comparative education, Mosston's Spectrum

What do teachers do in their classes, and why do they choose to do it that way? Those two questions have prompted much theorizing and educational research. Increasingly, educational theorists suggest that the answer to those questions may be teacher beliefs. Pajares (1992) proposed that beliefs are the best predictors of

an individual's decisions and may be even more important than factual knowledge in influencing decision making (Nespor, 1987). Beliefs influence a full range of teacher behaviors, including selection of content as well as delivery styles (Ernest, 1989).

An individual's beliefs are the assumptions he or she holds about the world and self (Athos & Gabarro, 1978). Beliefs are personal and powerful and shaped by one's life history. Logically, then, context is a key factor in understanding teachers' beliefs and their actions (Kulinna, Silverman, & Keating, 2000; Nespor, 1985). With regard to context, much of the physical education research has focused on the classroom level. For example, students (Cothran, 2001), teaching level (Behets & Vergauwen, 2004), or school location (Ennis & Chen, 1995) may influence teacher beliefs. Little attention in physical education has been paid to large-scale contextual influences, such as nationality.

Cross-Cultural Investigations

There is a European tradition of comparative education in physical education and sport (for an overview, see Hardman, 2001) that examines cultural influences. Few such studies in comparative pedagogy exist, however, in the North American literature. The Ennis Value Orientation Inventory (Ennis & Chen, 1995) has been the focus of several studies (Banville, Desrosiers, & Genet-Volet, 2002; Behets,

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2001; Chen, Liu, & Ennis, 1997) as has the Teacher Concerns Questionnaire (Meek, 1996; Meek & Behets, 1999). McBride, Xiang, Wittenburg, and Shen (2002) investigated American and Chinese preservice teachers' critical thinking, while Xiang, Lee, and Solmon (1997) focused on school age students' achievement motivation in American and Chinese settings.

The most surprising omission from European and North American comparative research in physical education is the near complete lack of research on teachers' beliefs related to Mosston's Spectrum of Teaching Styles (Mosston & Ashworth, 2002), arguably the most pervasive influence on physical education pedagogy internationally. When describing the Spectrum's influence, Arti (1995) claimed, "No single book has been translated into more languages, been used by more teachers and teacher educators, and endured so long in our field" (p. 421). Franks (1992) made similar claims in a silver anniversary salute to the Spectrum of Teaching Styles.

The Spectrum represents a continuum of lesson decision making from teacher-centered to student-centered. The current version of the Spectrum (Mosston & Ashworth, 2002) includes 11 different teaching styles. Style A—command—is the most teacher-centered; as the Spectrum moves toward Style K, learners are increasingly more involved in the decision making. The styles also vary in their purpose and are frequently divided into clusters by their focus on the reproduction (Styles A through E) or production (Styles F through K) of knowledge.

The purpose of this study was to explore teacher beliefs about Mosston's Spectrum of Teaching Styles from an international perspective. The specific questions that guided this study were: (a) Does a previously validated instrument designed to assess teachers' use and beliefs about teaching styles produce reliable and valid scores in an international sample of teachers? (b) Do physical education teachers from different countries differ in their self-reported use of teaching styles? (c) Do physical education teachers from different countries differ in their overall beliefs about the teaching styles? and (d) Do physical education teachers from different countries differ in their self-rated ability to use styles, years of teaching experience, and gender? From the perspective of individual countries, understanding teachers' experiences with and beliefs about teaching styles is significant for many reasons. First, understanding more about teachers' experiences and beliefs related to various styles helps establish a baseline that can be used in designing teacher preservice and inservice programs. For example, programs might be designed to promote the more effective use of common teaching styles or help teachers add new styles to their repertoire. Understanding teachers' underlying beliefs about the ability of styles to reach different goals can also lend insight into educators' understanding of teacher pedagogical knowledge. The results can also inform

teacher education programs about the teaching styles most commonly taught in schools and ways to better prepare preservice teachers to meet or exceed current practice.

From a comparative education perspective, understanding the pedagogical differences and similarities across countries is also important. The International Commission on Mathematical Instruction (2000) suggested that comparative studies can: (a) provide for a deeper understanding of various aspects of teaching and learning, (b) promote self-reflection to prompt a fresh look at current practice, and (c) allow countries to learn from others' successes and failures. Additionally, comparative studies can provide initial insights into the relationships between curricular imperatives, school structures, and the teaching styles they support.

Method

Participants

Participants in the current study were 1,436 physical education teachers from the U.S. ($n = 212$), Korea ($n = 225$), Australia ($n = 129$), France ($n = 134$), England ($n = 78$), Portugal ($n = 203$), and Canada ($n = 455$). All participants gave informed consent and were assured anonymity through the use of an assigned number. Not all participants completed the demographic questions in their entirety; thus, the total number of participants varies slightly per variable. Demographic data could not be used from France due to different demographic questions used on the French questionnaire; however, teachers from France were included in analyses related to teaching style use and beliefs. There were 753 male and 445 female participants. Sixty percent of the teachers taught at just one level: elementary ($n = 429$), middle ($n = 448$), or high school ($n = 379$). Teachers represented all experience levels, including 0–3 years of teaching experience ($n = 155$), 4–10 years ($n = 312$), 11–20 years ($n = 478$), or over 20 years ($n = 348$).

Data Collection and Instrument

The administration procedures varied by country, however, all used inclusive mailings or asked teachers to complete surveys during inservice sessions. As examples of typical procedures, detailed examples are presented for Canada and Australia. Data collection in Canada targeted four parts of the country (Quebec, New Brunswick, Prince Edward Island, and Ontario). Two versions of the Canadian instrument were approved, because participants were from both French and English speaking provinces. In Quebec, for example, the survey was sent to 1,050 randomly selected physical education

teachers (every third name) on the Ministry of Education list (there was a 34% return rate for this group). The administration methods used in Canada targeting both English and French speaking providences resulted in the largest country sample size. In Australia, surveys were mailed to 500 schools throughout Queensland encompassing both government and nongovernment schools as well as primary and secondary levels (there was a 27.2% return rate of at least one teacher per school).

Participants completed an instrument that assesses teachers' use and beliefs about teaching styles and has produced reliable and valid scores in a U.S. teaching population (Kulinna, Cothran, & Regualos, 2003). The instrument is designed to examine teachers' use of and beliefs about (i.e., fun, effectiveness, motivation) the Spectrum of Teaching Styles (Mosston & Ashworth, 2002) and includes a scenario for each of the 11 teaching styles followed by the following statements: (a) I have used this way to teach physical education; (b) I think this way of teaching would make class fun for my students; (c) I think this way of teaching would help students learn skills and concepts; and (d) I think this way of teaching would motivate students to learn. The instrument uses a 5-point Likert-type scale (1 = never, 5 = always, for experience questions; and 1 = strongly disagree, 5 = strongly agree, for belief questions). A listing of the scenarios is presented in Table 1.

A cross-cultural protocol based on Banville, Desrosiers, and Genet-Volet's suggested technique (2000) and recommended in many survey textbooks (e.g., American Educational Research Association, 1999; Litwin, 1995) was used to translate and validate the instrument for use in the participants' native language. This cross-cultural technique required researchers in all countries, including English speaking, to establish the cultural relevance of terms and expressions used in the instrument. The instrument was translated into new languages; then another team of individuals translated it back to English. In the next step, a group of five experts in physical education pedagogy evaluated the re-translated instruments for equivalency. A minimum of 80% agreement among the experts on translation accuracy for each item was required before approving the instruments for use. Each of the experts was: (a) knowledgeable with regard to the Spectrum, (b) used English as a first language, (c) was born and raised in a country other than the U.S., and (d) currently taught at the university level in the U.S..

Data Analysis

Tests were performed to determine if the instrument could produce reliable and valid scores in this multicultural population. Scales were created by summing the three items related to teachers' beliefs about individual

teaching styles to create a measure of overall beliefs for each of the 11 teaching styles. The 11 experience questions related to the teaching styles were also summed to create an overall experience measure. Internal consistency reliabilities were calculated for each of the 11 belief scales. To determine construct validity, cross comparisons using analysis of variance (ANOVA) were conducted for overall beliefs about the 11 styles by self-rated level of teaching ability (i.e., did beliefs about the styles increase as ability increased). Ability was recoded into three categories (very good, good, average), because only 6% of teachers rated themselves as "below average" or "not good" in relation to their ability to teach using different styles. The variance accounted for effect sizes were also calculated to investigate the strength of the differences across countries in self-rated teaching ability using partial eta squared (η_p^2 values were then converted to Cohen's f for easier interpretation. Cohen (1988) defined f values of .14 as small, .39 as medium, and .59 as large.

A chi-squared test was performed to investigate the differences among teachers across countries with respect to their experience for each teaching style. Adjusted standardized residuals were compared to help identify the nature of the differences. Multivariate analysis of variance was used to investigate differences in overall beliefs across countries. Univariate ANOVAs were used with the 11 belief variables to determine differences among countries. Partial eta squared (converted to Cohen's f) were computed as measures of effect size. Correlations were calculated to investigate the strength of the experience relationships (Item 1 for each style) with beliefs (Items 2–4 for each style) overall and by country.

Chi-squared tests were also conducted to determine whether differences existed across countries related to years of teaching experience, gender, and educational level. In addition, descriptive statistics were calculated for all of the variables.

Results

Reliability assessments showed a high level of internal consistency among items related to teachers' beliefs about each style, Cronbach alpha coefficients for overall beliefs about teaching styles ranged from .84 to .92. The ANOVA to test for ability and country effects on overall beliefs resulted in significant F s for country, $F(4, 900) = 18.56, p < .01$, and ability, $F(2, 900) = 6.96, p < .01$, while the interaction was not significant, $F(8, 900) = .49, p = .86$. Cohen's f was .29 for country and .12 for ability. Teachers' self-ratings of "very good" and "average" were significantly different from each other. Regardless of country, teachers' mean beliefs were more favorable as they

became more confident using a variety of teaching styles, supporting the construct validity of the instrument.

All countries were significantly different from each other in teaching style experiences. For example, all countries were different for the Command style $\chi^2(24, N=1,432) = 339.22, p < .01$. Korea consistently showed different patterns from the other six countries by mean comparisons and item responses. The percentage of teachers indicating use of “sometimes to always” for each style by country is shown in Table 2.

All countries were also significantly different from each other in their beliefs about teaching styles, $F(66, 8,148) = 12.10, p < .01$. The effect size for the omnibus F for overall beliefs was .31. The effect sizes for the univariate ANOVAs ranged from .11 for the Practice style to .46 for Self Teaching. For Mosston and Ashworth’s (2002) most student-centered teaching styles (i.e., from Inclusion to Self-Teaching), the country with the most experience using the style also saw it in the most favorable light, except for the learner-initiated style (i.e., Style J). England had the highest beliefs about five of the teaching

styles (i.e., C, E, F, H, I) as well as the most experience with five styles (i.e., E, F, H, I, J). Portugal had the lowest beliefs for seven styles (i.e., C, E, F, H–K). Korea (i.e., least experience for styles B–H) and France (i.e., least experience for styles A, I–K) reported the least experience with the teaching styles. Figure 1 presents differences on the reproduction and more teacher-centered styles, while Figure 2 depicts differences across countries on the student-centered styles or production styles.

Correlations between teachers’ overall experience and beliefs about the styles ranged from .431 to .716 and were all significant ($p < .01$). The correlations between teachers’ experience and beliefs for individual countries were also significant, except for the relationship between experience and beliefs about Style K (Self Teaching) in France.

Finally, differences were present across countries for teachers’ self-rated ability to use multiple teaching styles, $\chi^2(16, N=946) = 99.74, p < .01$, years of teaching experience, $\chi^2(20, N=1,296) = 518.25, p < .01$, and gender, $\chi^2(5, N=1,198) = 69.22, p < .01$. Ninety-four per-

Table 1. Teaching style scenarios

A	Command	The teacher breaks down the skills into parts and demonstrates the right way to perform the skill. Students try to move when and exactly how the teacher tells them. The teacher provides feedback and the students try to look like the teacher’s model.
B	Practice	The teacher makes several stations in the gym where students work on different parts of a skill or different skills. Students rotate around the stations and do the tasks at their own pace. The teacher moves around and helps students when needed.
C	Reciprocal	Two students work together on a task that the teacher has designed. One student practices while the other student gives feedback to the partner. The students might use checklists to help them give good feedback to each other.
D	Self check	Students work alone on a task and check their own work. The teacher might give them a checklist so that the students can provide feedback to themselves while they learn the task.
E	Inclusion	The teacher designs a learning task and there are several levels of difficulty. Students choose the level at which they want to work. Students can decide to make the task easier or harder by changing levels of the task to match their ability.
F	Guided discovery	The teacher asks students to discover a solution to a movement problem. The teacher asks students a series of specific questions and the students try out their answers until they discover the right answer that the teacher wanted them to discover.
G	Convergent discovery	Students try to learn a skill or concept by using logical reasoning. The teacher asks a question and students try to reason and think about different solutions. By critically thinking about the question and trying solutions, students can discover the single, right answer.
H	Divergent production	The teacher asks students to solve a movement question. The students try to discover different movement solutions to the teacher’s question. There are multiple ways for the students to answer the question correctly.
I	Learner’s individual designed program	The teacher picks the general subject matter, but the student makes most of the decisions about the learning experience. The student decides what will be learned within the teacher’s guidelines, and then designs a personal learning program with consultation from the teacher.
J	Learner initiated	The student decides what will be learned as well as how it will be learned. The teacher and student set some basic criteria, but the student is responsible for all the decisions about how and what to learn. The teacher can help with information if the student needs it.
K	Self-teaching	The student decides everything about learning something new. They even decide if they want to involve the teacher or not. The teacher accepts the student’s decisions about learning.

cent of teachers rated themselves in the top three categories for ability to use multiple teaching styles (i.e., very good, good, and average). Three countries with the least experienced teachers were England, Korea, and the U.S.

Four of the countries (i.e., Korea, Australia, Portugal, Canada) responded to questions about how teach-

ers learned to use teaching styles. For example, most of the Korean teachers used books (82.1%), while most of the Portuguese teachers learned this information in graduate school (94.2%). See Table 3 for a listing of the percentage of teachers indicating each learning source by country.

Table 2. Percentage of teachers indicating use of “sometimes to always” for each style by country

Style	Korea	Australia	France	England	Portugal	Canada	U.S.
Command	94.2	93.1	37.3	87.2	94.6	79.0	88.7
Practice	67.9	92.1	93.2	85.9	92.6	94.7	93.3
Reciprocal	55.1	85.0	82.8	96.2	61.9	75.7	73.6
Self check	41.3	46.9	61.2	56.5	44.7	61.9	52.1
Inclusion	59.1	78.6	84.3	92.3	69.9	72.1	67.0
Guided discovery	57.3	70.6	70.9	92.3	60.5	79.5	71.1
Convergent discovery	51.1	73.6	46.9	69.3	52.2	60.2	57.1
Divergent production	50.2	73.7	76.1	89.7	52.3	72.2	72.6
Learner’s individual designed program	32.9	40.4	17.9	57.7	24.8	23.7	26.4
Learner initiated	23.1	13.5	5.3	30.8	13.8	8.5	15.1
Self teaching	36.5	11.9	0.8	25.6	6.9	11.1	13.8

Table 3. Percentage of teachers indicating learning sources by country

Sources	n	Korea (%)	Australia (%)	Portugal (%)	Canada (%)
Books	894	82.1	76.8	42.3	72.0
UG program	911	41.3	82.7	8.7	77.6
G program	882	26.5	22.2	94.2	16.2
Inservice	900	51.8	85.1	27.5	77.1
Other teachers	895	54.3	91.3	10.3	77.8
Other sources	875	38.7	52.9	0	45.6

Note: UG program = undergraduate program; G program = graduate program.

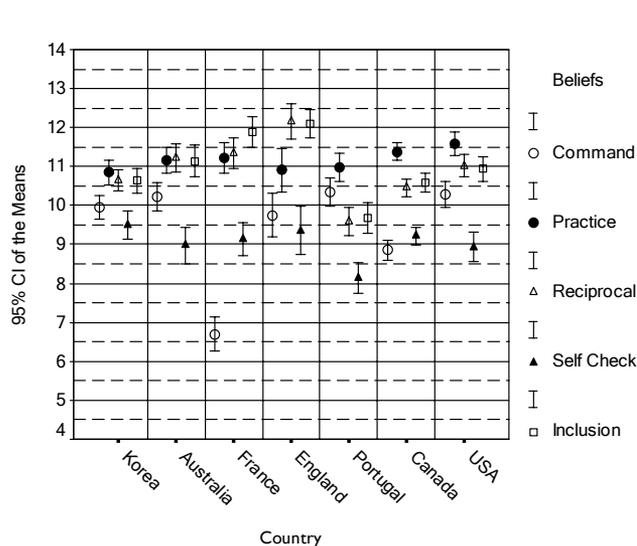


Figure 1. Means and confidence intervals (CI) for overall beliefs about reproduction teaching styles by country.

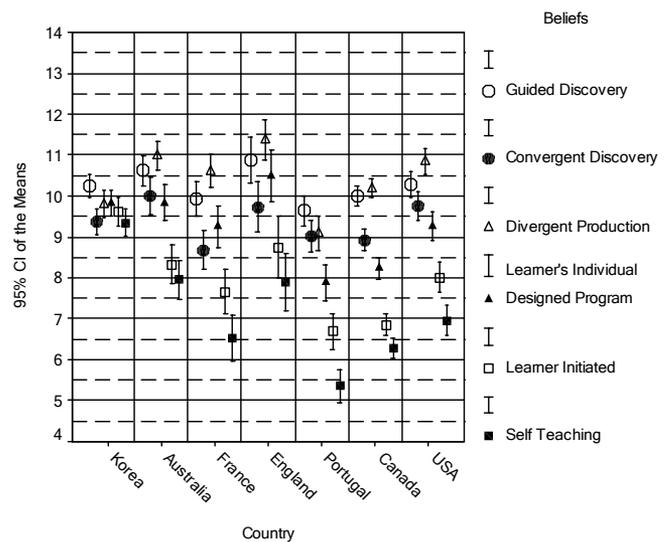


Figure 2. Means and confidence intervals (CI) for overall beliefs about production teaching styles by country.

Discussion

Because beliefs influence teacher action, and context influences beliefs, it seems logical that national context would influence teachers' use of and beliefs about Mosston's Spectrum of Teaching Styles. The results of this investigation support this presumed relationship, as teachers from different countries exhibited different practices and held different beliefs about possible benefits of the spectrum. National context was apparently just one of many influences on teachers' beliefs and teaching practices, however, as there were also similarities across many countries. Due to space constraints, only illustrative examples of similarities and differences are provided to highlight key findings.

Teacher beliefs about the use of styles varied, as all countries were significantly different from each other in teaching styles. For example, Korea and Portugal use reproduction styles most frequently, with command and practice styles being used most commonly in both countries. In contrast, England, Australia, and Canada used production styles more than Korea and Portugal. Even within those three countries, however, there were differences in rate of use.

Another finding from this study suggests cultural influences on teachers' beliefs in that all countries were significantly different from each other in their beliefs about the potential benefits of the teaching styles. Although the effect size for the omnibus F ($f = .31$) fell slightly short of a medium effect (based on Cohen's 1988 guidelines of a medium effect explaining at least 39% of the variance), there is a meaningful difference in overall beliefs about styles across the countries. Differences by individual teaching style (i.e., effect sizes for univariate ANOVAs) showed small to large differences across countries. Overall, England perceived more styles more positively than did other countries, while Portugal tended to view the styles more negatively than did most other countries. Countries also showed variability in their beliefs about all styles. For example, Korea reported similar beliefs (with little range of rankings) about most of the styles, while other countries, including France and England, showed a much wider range in beliefs across styles.

Because this is an initial investigation, it is impossible to explain fully these national differences in teacher beliefs. It is, however, interesting to speculate why those differences occurred, and these speculations may guide future research. One possible explanation more thoroughly explored in the general education literature is the difference in collectivist and individualistic cultures (e.g., Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994). Collectivist cultures, like those in many non-Western countries, are those in which conformity and group needs are cultural priorities. In such collec-

tivist cultures, one might expect more use of the reproduction styles, as teachers might believe in the importance of standard information presentation and student performance. In fact, that trend was true for this data set, as Korea, a country traditionally seen as a collectivist culture, used the reproduction styles most frequently. Cultural priorities, in turn, impact curricular history in each country and that may influence current teacher beliefs and practice. For example, the movement education heritage that the Commonwealth countries share may lead to more use of the production styles.

Another likely influence on teacher beliefs about the styles is the presence of a national curriculum and any accompanying mandatory assessments. The countries studied ranged the gamut from a decentralized educational system in the U.S. to a centralized system like the one in France. Teachers from France may be a good example of the possible influence of a national curriculum on teacher beliefs and practice. France adopted a new national physical education curriculum over 15 years ago, when they moved from a linear and hierarchical model that focused on units to be reproduced to a constructivist model that centered on the connections and meaning of various curricular content. With the switch came more emphasis on individualization, differentiation of tasks, and problem solving approaches. Those goals clearly suggest the use of production teaching styles, and, in fact, the French teachers reported using several of those styles frequently. They also reported using reproduction styles frequently, with the exception of the command style.

It is unclear, however, if the national curriculum actually influenced teachers' beliefs and practices or if it influenced what they said about their beliefs and practices. For example, perhaps the French teachers' low reports of command style use were an attempt to provide the "right" answer with regard to their national curriculum goals, despite the anonymous nature of the survey. Sparkes (1987) used the term "strategic rhetoric" to explain teachers' change in language with little change in practice. In support of this view, Curtner-Smith, Todorovich, McCaughtry, and Lacon (2001) found that a change in England's national curriculum did not seem to influence teachers' use of a range of teaching styles.

These national teaching differences support similar findings in the general education literature. The largest and most recent version of comparative research is the Third International Math and Science Study (TIMMS). In general, the TIMMS results showed relative similarity of teaching methods within countries but significant differences in methods across countries. Stigler, Gonzales, Kawanaka, Knoll, and Serrano (1999) described these differences as a cultural lesson script for each country. Andrews and Hatch (2000) offered similar support for

distinctive national pedagogies that reflect key differences in teaching methods across countries.

Like the general education literature (e.g., Anderson, Ryan, & Shapiro, 1989), however, other evidence suggests that, although there are differences, teachers also share similarities across national contexts. The Anderson et al. (1989) overview of classroom environments from various countries suggested that classroom teaching appears to be classroom teaching around the world. The authors hypothesized that the similar structures and organization of education result in a common classroom structure that, although the specifics may vary, still share many common aspects of teaching. Some results from this study support the notion of a “world core” physical education teaching strategy at work.

The first similarity is that teachers worldwide reported using a wide variety of styles. It is encouraging that teachers reported using many styles, but these results must be interpreted cautiously, as prior research suggested teachers may not be able to provide accurate descriptions of their own teaching behaviors (Good & Brophy, 1997). That tendency to overestimate has some support from this study. The most obvious example is the teachers’ reports of their use of the self-teaching style. It seems highly unlikely that teachers are actually using the self-teaching style in school settings, yet teachers from five countries reported using that style frequently over 10% of the time.

A second similarity is that the teachers’ overall positive beliefs about the benefits of the styles were more favorable as they became more confident using a variety of teaching styles. Regardless of the national culture, confidence in teaching style ability meant that the teachers held more positive beliefs about the styles. This suggests that teacher preparation and professional development programs should provide opportunities for teachers to learn about and practice their methods in positive, confidence-building environments.

A final common theme to note is that reproduction styles were much more commonly used and viewed more positively than the production styles, regardless of the country. Certainly there are exceptions to this trend (France’s limited use of the command style being the most striking of these exceptions), but, overall, reproduction styles seemed to dominate in physical education around the world. What factors could contribute to this beliefs trend? One possible explanation is a relatively homogenous “physical culture” and subject matter content so well defined and agreed on that similar reproduction teaching methods are used despite cultural influences. Chen et al. (1997) suggested that similar practices may occur in countries with a history of interaction and philosophical exchange. Certainly, many of the countries in this study have shared such exchanges.

Another possibility is that teachers respond to their students’ preferences. Cothran, Kulinna, and Ward

(2000) found that many students in the U.S. preferred reproduction teaching styles. A third possibility is that the teachers’ lack of experience with the styles was a factor, as teachers, at least in the U.S., were less likely to have experienced the production styles as students in physical education classes or in their preservice programs (White, 1998). This lack of experience and exposure impacts teachers’ efficacy and, consequently, their use of the styles. Future research is needed to explore the impact of how teachers learn about different styles, whether through their teacher education or professional development programs. The limited data reported here on how teachers from various countries learned about styles reveals different professional development avenues worthy of future exploration. Those licensure and professional development paths also likely influenced the teachers’ beliefs about the styles.

It is also possible that the teachers had the ability to teach the production cluster styles but intentionally chose not to do so. If it was an intentional choice by the teachers, one potential reason might be the demands of national curricula and educational mandates. In countries with mandated curricula and where senior high school physical education courses may contribute to university entry scores, the rigorous assessment requirements provide a context that promotes using reproductive teaching styles at a utilitarian level. The fact that all countries, including those with no national curriculum, however, favored reproduction styles suggests other factors were also likely at work.

Student control may be another possible explanation for the relatively low use of production styles. These styles could be viewed as a threat to student control, as students would not all be engaged in the same task, or producing similar outcomes with these styles. Curtner-Smith et al. (2001), working with teachers in England, suggested student control was an environmental factor influencing style use. Future research is needed to clarify why teachers did not implement the production cluster styles despite their positive views towards at least some of the styles in the cluster.

Although there are similarities in style use, one must guard against assuming that similar rates of use equates to similar use. Fuller and Clarke (1994) found that teachers using the same instructional methods assigned different meanings to the methods. Gao and Watkins (2002) provided similar reports of how some Chinese teachers believed that Western conceptions of teacher-centered approaches were, in fact, student-centered when considered in the context of Chinese classes and culture. Future research is needed to clarify how and why teachers use various styles.

A few limitations to this study should be noted. The large number of participants predisposed this project to significant findings. There were also different sample

sizes used by country, with a small sample from England. Finally, additional studies involving different data sources, such as direct observation and interviews, can strengthen findings from this self-report study.

Despite these design shortcomings, the results of this initial attempt to understand physical education teachers' use of and beliefs about teaching styles around the world provide some insights into shared and different approaches to teaching. Interpreting and truly understanding these results, however, is a daunting task. Poppleton (1992) suggested that comparative researchers should have:

...possession of contemporary knowledge about how systems are constructed; historical knowledge of how they came to be what they are; anthropological knowledge of the mores and customs embodied in them; and sociological and psychological frameworks of reference in order both to contextualize the picture and to elaborate the finer details (p. 215).

It is our hope that this initial investigation serves as a prompt for other colleagues to begin the collaborative process necessary to examine the factors identified by Poppleton and to answer the questions raised by this study. Doing so will allow us all to learn much about ourselves, others, and physical education.

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