

A Critical Review of Hong Kong Schools' Physical Education — 1984–2009

Amy S. Ha

Lijuan Wang

Department of Sports Science and Physical Education

The Chinese University of Hong Kong

Like other subject areas, physical education throughout the past decades has been influenced by an array of trends, issues, research studies, and public policies. In general, the development of physical education is responsive to the needs and concerns of the society. A critical review of physical education is particularly important in Hong Kong at this time, given the widespread public concern regarding the content of the existing physical education program and the fitness levels of the Hong Kong youth. Therefore, the goal of this paper is to describe the different ways researchers have gone about studying the following: (1) Overview of the Physical Education Curriculum and Education Reform, (2) Research on Teaching and Learning, (3) Research on Teacher Education, and (4) Future Directions.

Key words: physical education curriculum, teaching and learning, teacher education, Hong Kong

Correspondence concerning this article should be addressed to Amy S. Ha, Department of Sports Science and Physical Education, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong. E-mail: sauchingha@cuhk.edu.hk

Search Method

A systematic process was used to search the literature for this review. It followed the same standard principles and procedures used in the *Systematic Reviews in the Social Science: A Practical Guide* by Petticrew and Roberts (2006). Computer searches in SPORTDiscus, HKInChiP, HKUL Digital Initiatives, and CNJ for information from 1984 to 2009 were conducted. The search keyword string used was “physical education AND Hong Kong,” which was entered in the title, abstract, or keyword fields. Subsequently, manual searches in five Hong Kong educational journals and government educational documents not included in these databases were also reviewed. After all searches were completed, the total number of identified articles from these databases was 267. The bibliographic details and abstracts of all initial “hits” were imported to EndNote, and duplicate references were removed. After removing the duplicates, the count was reduced to 125 articles. The title and abstract of each article were then reviewed by the authors to decide if the content fits into these three categories: (1) Physical Education Curriculum and Education Reform, (2) Research on Teaching and Learning, and (3) Research on Teacher Education. The inclusion criteria were as follows: (a) articles related to physical education in Hong Kong were identified, while other unrelated literature were excluded; (b) articles written in English and Chinese were included; (c) published articles were included, while unpublished dissertations and conference proceedings were excluded; (d) studies employing quantitative or qualitative methods were included; and (e) government educational documents were included. After trimming, the final number of articles and government documents included in the analysis was down to 62. Online and library searches for the full text of these studies were conducted. Articles not available in the library of the Chinese University of Hong Kong were requested from the libraries of other local universities. Unlike some of the more conventional reviews using a historical and descriptive method, this review, based on the theoretical perspective of Wright (2004) and Kirk (2004), attempts to examine the status quo and the development of Hong Kong’s physical education from a critical thinking and problem-solving approach.

An Overview of the Physical Education Curriculum and Education Reform

In analyzing the Hong Kong physical education curriculum, this part adopts the framework of the subject matter (curriculum documents) and the socio-cultural milieu (educational reform) suggested by Kirk (1988) to review and analyze the issues in the past 25 years. For decades, the role of physical education in the Hong Kong school curriculum has been a controversial issue in the face of the emphasis on academic subjects (Fu, 1988; Fu, 1990; Johns, Ha, & Macfarlane, 2001; Morris & Sweeting, 1991; 招樂輝、何稀翎、李雁南, 1996). Nevertheless, concern about the students' health and fitness status has drawn attention to the problem. In the 1980s and the 1990s, the Hong Kong Curriculum Development Committee (CDC) officially initiated the syllabuses of Physical Education for primary (CDC, 1995) and secondary (CDC, 1988) schools, respectively, in order to include physical education as part of the school curriculum. The key objectives of primary physical education (CDC, 1995) are to improve pupils' fitness, to develop pupils' desirable social attitudes, to cultivate pupils' sense of aesthetic appreciation, and to stimulate pupils' interest and positive attitude towards physical activities. From the secondary school syllabus (CDC, 1988), it was stated that "Physical Education is part of the school curriculum. Its overall aim is to help students develop an active lifestyle and acquire good health, physical fitness, and bodily coordination by means of teaching them various sports skills and knowledge. It further helps to promote the qualities of desirable moral behaviours, cooperation in communal life, the ability of making decisions, and the appreciation of aesthetic movements" (p. 5). These documents have served as the recommended guidelines for Hong Kong schoolteachers to implement their teaching in the past 20 years. Until recently, Physical Education has become one of the eight key learning areas (including Chinese Language Education, English Language Education, Mathematics Education, Technology Education, Science Education, Personal, Social and Humanities Education, Arts Education, and Physical Education) in Hong Kong (CDC, 2002). A recent government policy on educational reform has likewise presaged a shift from a teacher-centred to a learner-focused curriculum. In addition to the knowledge subjects such as English, Chinese, and Mathematics being taught in a more interactive approach, teachers are now generally expected to build up other generic skill requirements to enhance the students' ability in collaboration,

communication, creativity, and critical thinking through learning in these subjects; Physical Education is no exception.

With the assumption that schoolteachers had followed the curriculum guide suggested by the Education Bureau in the last two decades (CDC, 1988; CDC, 1995; CDC, 2002; CDC & HKEAA, 2007; Chan, 2005), the scholars of Hong Kong conducted a series of research to discuss the content of these documents and their impact on the practice (Chan, 2005; Fu, 1988; Fu, 1990; Ha & Fishburne, 2006; Ha, Lee, Chan, & Sum, 2004; Ha, Wong, Sum, & Chan, 2008; Johns, 2003; Johns & Dimmock, 1999; Johns, Ha, & Macfarlane, 2001; Vertinsky, McManus, & Sit, 2007; Vertinsky, McManus, Sit, & Liu, 2005; 亦言, 1996; 馬宣建, 1997; 陳雁揚、關文明, 2000). Among these investigations, it was Johns and colleagues who particularly looked into the issues of the curriculum policy and the implementation process of education reform. These studies concluded that the gap between what is planned and what materializes as the curriculum in Hong Kong is substantial (Johns, 2003; Johns & Dimmock, 1999; Johns, Ha, & Macfarlane, 2001). Johns (2002) further commented that, on the one hand, the Hong Kong government has been highly bureaucratic and in control of curriculum decision making (Morris, 1995); but on the other hand, it has also attempted to portray an image that is less autocratic by emphasizing a more school-based reform (Education and Manpower Branch & Education Department, 1991). Ultimately, devolutionary and bureaucratic moves have resulted in a fragmentation of advisory policies and practices.

There has been much debate on the part of curriculum scholars about the factors that influence schoolteachers. These scholars maintained that the decisions on teaching objectives, implementation of the content, and the evaluation procedures originate from a set of different philosophical positions (Jewett, 1994; Jewett & Bain, 1985). These philosophical positions that are referred to as value orientation reflect the primary concerns for either learning subject matter content, personal development, socio-cultural goals, or a combination of two or more of these three curriculum sources. Jewett, Bain, and Ennis (1995) identified five value orientations among physical educators: (1) Disciplinary Mastery (DM), which focuses on developing performance proficiency in sports skills (subject matter content); (2) Learning Process (LP), which believes that learning how to learn is central to the content of physical education (problem solving); (3) Self Actualization (SA), which focuses on the child's personal growth (be all you can be); (4) Social Responsibility (SR), which considers physical activities and sports as vehicles to help students learn to

align their individual needs with the needs of the society (socio-cultural); and (5) Ecological Integration (EI), which believes that a balanced curriculum can provide relatively equal considerations for the needs of the learner. Research has shown that the teachers' value orientation or their belief in teaching can have a considerable influence on a teacher's curriculum content priorities relative to student needs and interests, school-oriented socialization, and knowledge demands (Ennis, 1992).

When examining the Hong Kong physical education curriculum documents (CDC, 1988; CDC, 1995; CDC, 2002), it was found that the educational philosophy or value behind it is the model of Personal Meaning, which is based on the value orientation of Ecological Integration (EI). This model purports that "the role of the educator is to analyze potential sources of meaning, to provide a wide range of opportunities, and to respond supportively to the individual's search for meaning" (Jewett & Bain, 1985, p. 72). Physical education teachers who place a high priority on ecological integration attempt to give equal emphasis on learning the subject matter, the personal development of their students, and the attainment of identifiable socio-cultural goals. To investigate the teachers' value orientation in physical education, Ha and colleagues compared the primary and secondary teachers' value orientation among the territories and found that Hong Kong teachers consistently place a significantly high priority on disciplinary mastery (DM) and a significantly low priority on self-actualization (SA) and ecological integration (EI) than their counterparts in Shanghai and in the United States (Ha, 2001; Ha, Keh, & Xu, 2007). Teachers placed higher priority on a disciplinary mastery value orientation emphasizing the "correct" and most "efficient" way of performing a skill regardless of students' interest and skill level. Such findings contradict the proposed learning objectives of the Hong Kong physical education curriculum of nurturing students to be an active individual (SA) and ultimately to be a well-rounded person (EI) through physical activities (CDC, 1988; CDC, 1995; CDC, 2002). Obviously, there is a gap between the Hong Kong teachers' belief and the government-initiated curriculum objectives. Future studies and initiatives are urgently required to examine this phenomenon.

From a learner-focused perspective, Vertinsky and colleagues (Vertinsky et al., 2005; Vertinsky et al., 2007) examined the gendering of physical education in Hong Kong. The discussion stressed that the gendering of physical activities occurs within particular historical contexts and institutional conditions. These studies highlighted that "sex stereotyping

of sports activities that constrain learning and interest and the low motivation and participation of women and girls in health-enhancing physical activity are emerging as two of a number of pressing concerns” (Vertinsky et al., 2005; p. 825). Further observation on the physical education curriculum revealed that the existing content offers little to girls with regard to their interest, ability, and needs in physical education. Ha, Johns, and Shiu (2003) echoed these phenomena in that the Hong Kong curriculum design should be based on a more learner-oriented approach and that providing young people with the opportunity to become more involved in their education showed considerable promise. Future planning for the improved effectiveness of physical education in Hong Kong will require a greater understanding of and sensitivity to the needs of the post-modern youth culture.

During the period of 1996 to 2006, based on the principle and spirit of the Disability Discrimination Ordinance — Code of Practice on Education (Dowson, 2000; Education and Manpower Bureau, 2006; Education Department, 1996; Education Department, 2002), the inclusive education policy was initiated and implemented. Under this new educational policy, students with Special Education Needs, which include speech and language impairment, hearing impairment, visual impairment, physical disability, intellectual disability, autism spectrum disorders, and learning difficulties, were included in ordinary schools. Chen and colleagues (Chen, Lau, & Jin, 2006; Chen, Zhang, & Liu, 2004) investigated the pre-service physical education teachers’ views on including students with disabilities in regular physical education settings in Hong Kong. Unfortunately, this group of pre-service teachers perceived themselves to be unprepared and lacking the confidence to teach students with disabilities in their class together with those without disabilities. Apart from providing ample training to pre-service physical education teachers to cope with this educational initiative, these studies also suggested that the environmental and support services should be secure prior to integrating students with special needs into ordinary schools.

In conclusion, national studies (Chan, Li, Hong, & Leung, 1998; Eston, Ingledew, Fu, & Towlands, 1998; Hui, 2004; Johns & Ha, 1999; Lee, Tsang, Lee, & To, 2003; Leung et al., 2000; Lindner, 1998) point to the declining participation of young people in sport and physical activities and to the consequences of this decline to their health. It is important to develop explanations for this phenomenon which that will inform policies and strategies to reverse this trend. Physical activity is an important element of

health and wellbeing, and the patterns set in youth tend to set the basis for adult practices. To help combat physical inactivity, a case is made for the creation of quality programs in schools' physical education curriculum. If children are to engage in active healthy lifestyles, they will need knowledge, skills, and attitudes necessary for their successful participation in physical activity. Hence, schools' physical education will have a vital role to play if the current trend of a sedentary, unhealthy lifestyle witnessed in most countries of the world today among children, youth, and adults is to be changed.

Research on Teaching and Learning

In an age of accountability and educational reform, policymakers and educators expect all students enrolled in physical education courses to receive quality instruction throughout a well-designed curriculum taught by dedicated professional physical educators (National Association for Sport and Physical Education, 1995). In Hong Kong, the inactivity of young people has been well documented and has become a health concern (Chan et al., 1998; Ha & Fishburne, 2006). As the literature on effective physical education flourished during the 1980s internationally and the 1990s locally, the focus broadened to include the mental processes of teachers and students as well as their behaviour. In Hong Kong, a considerable number of studies have consistently looked into the status quo and development of effective physical education teaching and learning (Chow, McKenzie, & Louie, 2008; Fung, Ha, & Fu, 1993; Ha, 1996; Ha, Johns, & Fung, 2001; Ha, Johns, & Shiu, 2003; Johns & Ha, 1999; Lindner, 1998). In general, the goals, thoughts, feelings, expectations, and attitudes of teachers, teacher educators, and students are accepted as important in the research process.

Fung et al. (1993) indicated that both pre- and in-services Hong Kong physical education professionals generally held positive beliefs towards physical education, but the ultimate education objectives needed to be identified and reflected at different time frames in order to maximize the role of schools' physical education in an ever-changing society. Investigators further indicated that physical education in schools has received the emphasis it should have, and that physical education has been included as an examination subject in the Hong Kong Certificate of Education Examination.

By adopting a systematic observational method, Ha and colleagues examined the real teaching-learning settings in schools (Ha, 1996; Ha 1999; Ha, 2001; Ha, Johns, & Fung, 2001; Ha, Johns, & Shiu, 2003; Ha, Pang, & Cheung, 2004). It was concluded that Hong Kong physical education teachers spend too much time on pre-instruction (explaining the skills or strategies at one time) and less on interaction with students during lessons compared with what was indicated in the professional guidelines. More simplified instruction (classroom management skills and task presentation) and modified games (less structured or regulated) are urgently required for less skilled and low motivated students (Lonsdale, Sabiston, Raedeke, Ha, & Sum, 2009). In addition, a more supportive learning environment, such as providing more positive and congruent feedback (Ha, 1996; Ha, 1999) as well as providing more free choices (Ha et al., 2001; Ha et al., 2003; Lonsdale et al., 2009), will result in greater student learning. By using a tri-track motion sensor, a heart rate telemetry, and direct observation, Macfarlane and colleague (Macfarlane, 1997; Macfarlane & Wong, 2003) measured the students' activity time during physical education lessons and reported that less than 4 percent of a group of primary children in Hong Kong are able to maintain light to moderate vigorous physical activity (MVPA), and low activity and enjoyment levels were consistently found. Consistently, Johns and Ha (1999) also reported that Hong Kong children's active behaviours are extremely limited in both the school and home setting due mainly to environmental reasons. Subsequently, Chow and colleagues examined Hong Kong primary schools children's MVPA level and found that it improved to 15.8 minutes during a 30-minute physical education lesson provided that the subject matter (skill theme), proportion of time to be allocated to the active lesson content, small class size, as well as teacher behaviour should be considered and significantly influence student MVPA percentage (Chow et al., 2008).

While some researchers focused on one or two aspects of the teaching-learning environment and analyzing thoughts and actions in great detail, others provided evidence to complete the picture of teachers as facilitators in the learning environment and students as active participants playing a bigger role. In physical education, there is a significant and growing interest in examining the effects of different teaching models (Chin, Yang, & Masterson, 2003; Griffin & Butler, 2005; Liu, 1994; Liu, 2004; Rink, 2001). Some previous examples include sports education (Chan & Alberto, 2006), fitness curriculum (Corbin, 1994), and teaching social responsibility through physical activity (Hellison, 1995; Wong & Louie, 2002). Recent

literature and research in teaching physical education have seen a resurgence of methods. The argument in the literature has posited a more traditional and direct method of teaching (Behaviorist) against those primarily based on more cognitive and socially based applications of learning theories (Constructivist). Behaviorist teaching methods tend to effectively reinforce the response patterns by providing consistent repetition. It is limited since behaviorists believe that the concept of mental states can be discarded (Freiberg, 1999). Cognitive psychology and then constructivism, on the other hand, emerged and replaced behaviorism as the most popular paradigm for understanding mental function in the late 20th century. The mental process is addressed instead of the behavioral responses. According to constructivists (Piaget, 1970), each person constructs knowledge based on personal experiences. Therefore, learning is problem solving based on personal discovery, and the learner is intrinsically motivated (Cooper, 1993; Fu, 1999). Such shift is both a global (Garet, Porter, Desimone, Birman, & Yoon, 2001) and local (CDC, 2002; CDC & HKEAA, 2007) trend in education reform to enhance quality teaching and learning from a learner-focused approach.

Among these models, Teaching Games for Understanding (TGFU) is the most popular one emphasizing student-centered learning in which the teacher facilitates the learning process and problem-solving approaches. Since the introduction of the TGFU model by Thorpe and Bunker in 1982, it has attracted growing research attention (Butler, 2005; Butler & McCahan, 2005; Kirk & MacPhail, 2002; MacPhail, Kirk, & Griffin, 2008; Metzler, 2005) due to its potential to (a) facilitate the development of technical skills and tactical knowledge, (b) empower children to learn for themselves and take responsibility, (c) assess the tactical transfer across games, and (d) increase the fun and enjoyment in playing games. Despite the trend of the TGFU being adopted in many countries, this approach is still new to most teachers in Hong Kong (Liu, 2002, 2004). The TGFU model was firstly introduced in Hong Kong in the 1990s as a part of major curricular and pedagogical models. Many frontline teachers showed their different levels of concerns to this new approach (Liu, 1997, 2004; 廖玉光、劉錦新、錢銘佳, 1994). However, pre-service teachers in Hong Kong also faced the same challenge as those in other countries in the world (Ha, Butler, Pratt, & Collins, 2008; Li & Cruz, 2006; 廖玉光、楊靜珍、錢銘佳, 1998).

In further reviewing why and what local physical education teachers prepare for the recent curriculum reform, very few research on this area were found such as examining teachers' beliefs, intentions, and actions in

implementing curricular innovation. Ha and colleagues studied a group of pre-service physical education teachers (Ha, Butler, Pratt, & Collins, 2008) on their teaching perspective, namely, (i) *Transmission*, which indicates that effective teaching requires a substantial commitment to the content or subject matter; (ii) *Apprenticeship*, which indicates that effective teaching is a process of enculturating students into a set of social norms and ways of working; (iii) *Developmental*, which indicates that effective teaching must be planned and conducted “from the learner’s point of view,” a highly emphasized perspective adopted by the TGFU model; (iv) *Nurturing*, which indicates that effective teaching assumes that the long-term, hard, and persistent effort to achieve comes from the heart as well as the head; and (v) *Social Reform*, which indicates that effective teaching seeks to change society in substantive ways (Pratt & Collins, 2000). The results showed that pre-service teachers’ Social Reform scores were consistently higher, but their Developmental scores were lower. In other words, this group of student teachers perceived the importance of social change and its crucial relationship with a student’s school experience. For the “Social Reform” perspective, the object of teaching is the collective rather than the individual, and students are encouraged to take a critical stance in order for them to have the power necessary to take social action and improve their own lives. In Physical Education, students under the Social Reform perspective will be taught to live in a healthy manner through active and regular participation in physical activities so as to lower the medical cost paid by the government. For the Developmental perspective, emphasis is given to nurturing students’ collaboration, communication, problem solving skills and creativity, a perspective which is highly promoted by the government (CDC, 2002; CDC & HKEAA, 2007). However, these aspects did not receive equal attention and adoption by the student teachers. This study implied that further investigation should be done on pre-service teachers and in-service teachers as well as teacher educators’ views on this educational/instructional shift in order to ensure that the challenge of the reform is addressed.

Research on Teacher Education

Guskey (2002) indicated that the relationships among change in teachers’ classroom practices, change in student learning outcomes, and change in teachers’ beliefs and attitudes are highly complex and reciprocal. He further elaborated that the evidence of improvement in the learning outcomes of

students must be in line with the evolution and renewal of teachers' professional development, including both initial teacher training and continuous professional education. In Hong Kong, the general debate on education does not differ significantly from the themes debated in other countries, with academic performance being a common and central theme (Locke, 1992; Rink, 2001; Siedentop 1992; Tinning, 1991; 何敬恩, 1997). Fortunately, the role of schools' physical education in Hong Kong has evolved to a more optimistic trend (CDC, 2002; CDC & HKEAA, 2007) when children's health issues became a major public concern. Nevertheless, apart from initiating a learner-focused curriculum for primary and secondary students, teacher education in physical education in the meantime is still faced with the challenge of relevancy and may experience difficulty in achieving the government's proposed new teaching and learning objectives, which are not automatically supported by the community (Ha, Lee, et al., 2004; Ha et al., 2008; Ha et al., 2009; 亦言, 1996; 馬宣建, 1997). Through a large-scale review of teacher development, Villegas-Reimers (2003) found that if "professional development opportunities and systems are to be effective, different stages of teacher careers must be taken into consideration since the teachers' needs and dispositions may vary between one stage and the next" (p. 129).

Experts in teacher education have led to the understanding that there are different types and amount of knowledge for teachers. Declarative knowledge of content concepts and principles becomes powerful for student teachers when it is connected with procedural knowledge (pedagogical knowledge) of actions and skills (Harrison, Blakemore, Buck, & Pellett, 1996; Hellison & Templin, 1991; Rink, 2006; Wong & Louie, 2002). Other knowledge such as conditional knowledge of under which context or circumstance of adopting which teaching method at which skill level are deemed as more advanced for novice teachers. Chow and Louie (1992) found a significant difference between student teachers and in-service teachers on the perceptions of successful teaching, with student teachers valuing good relationships with students and colleagues more and in-service teachers focusing more on students' discipline and student learning during instruction. Ha (1996, 1999) subsequently observed that pre-service physical education teachers tend to spend less time on questioning, interacting with students, and providing feedback to their students compared with their in-service counterparts. Li (2000), on the other hand, found that a group of Hong Kong student-teachers tend to prefer their professional knowledge to be linked with reality (i.e., curriculum reform) or real

teaching situations (i.e., teaching practice). Such finding is in line with the other researchers' preposition that the "what," "how," and "where" are on the top priority of the learning objectives and experiences for initial training (Cruz, 2000; Johns & Shuttleworth, 1996), and the logic of "why," "whom," and "when" still require attention in formalizing Hong Kong teachers' professional development to a more holistic and reflective approach (Ha et al., 2008; Rodriguez & Berryman, 2002; Wong & Louie, 2002; 何敬恩, 1997). At a similar time frame, Cruz (2000) reported that student teachers spend significantly more time on planned presentations, classroom management, and organizational behaviors than experienced teachers. Shiu and Ha (2001) subsequently found that novice teachers spend more time on managerial behaviours, while experienced teachers focus more on instructional and communication skills. However, they further discovered that when providing more reflective skills and communication opportunities for the student teachers in the early phase of teacher training (such as recording one's teaching act on video and reviewing it for information and improvement), novice teachers may not be less effective than their experienced counterparts.

During the past decade, constructivism has become the reigning paradigm in teacher education. More and more teacher education programs portray themselves as following a constructivist approach (Richardson, 1997). Cherubini, Zambelli, and Boscolo (2002) suggested that social transformative constructivism implies that teachers construct new ways of thinking and planning; learning occurs in a social and cultural context; and teacher education should be situated in real activities and practical context. In this study, constructivism provides guided principles for the design of a professional development program. In the study by Zozakiewicz and Rodriguez (2007), three guiding concepts from constructivism were proposed for professional development including being responsive and theoretically explicit, providing ongoing and on-site support, and reflexive approaches to collaboration. Another four perspectives of social transformative constructivism including dialogic conversation, authentic activity, meta-cognition, and reflexivity were employed by Rodriguez and Berryman (2002) to explain the issues and difficulties that can be encountered by beginning teachers who are committed to teaching for understanding, providing evidence for the design of a professional development program. In research on physical education teacher development, most applications of the social constructivist theory addressed the way teachers learn through social interaction as delineated by the zone

of proximal development (ZPD). Armour and Yelling (2007) drew on social constructivism to suggest that professional learning communities are an effective mechanism for teacher learning, as according to the constructivist perspective, “learning is an active and creative process involving an individual’s interaction with their physical environment and with other learners” (Kirk & Macdonald, 1998, p. 377). Duncombe and Armour (2004) tried to link Vygotsky’s (1978) concept of the ZPD with collaborative professional learning. In the ZPD, a person’s potential development depends on what he or she can achieve with the help of the others, which supports the value of mentoring and collaboration. Two current longitudinal studies (Ha, Lee, et al., 2004; Ha et al., 2008) reported that Hong Kong physical education teachers, regardless of their teaching experience, identify “pedagogical skills for different types of students,” “teaching of generic skills,” and “student assessment” as the areas which need to be given more attention. On the other hand, novice teachers (less than three years of teaching experience) consistently require strong leadership and support within and outside the school to promote “collegiality” and “knowledge of educational contexts.” Experienced teachers (more than 10 years of teaching experience) are particularly concerned about “continuous learning” and the “change process,” which can be attributed to their traditional background and less opportunities for professional development. Ultimately, experienced teachers show a stronger commitment to their careers, while novice teachers feel insecure about implementing their professional role under the uncertainties of the reform. It is suggested that a teacher development program be purposefully and systematically designed for teachers of different career stages, and more importantly, that their needs be communicated to the government and the public to achieve the best outcome from the professional and educational changes.

Although most findings have suggested that these physical education teacher development programs appear to offer far-reaching benefits for teacher learning, there is still a lack of outcome measures from student learning. In fact, teachers attending professional development programs encourage students to engage in physical education more; thus, the students’ learning outcome is an important measurement index for the effectiveness of a professional development program (Deglau, Ward, O’Sullivan, & Bush, 2006). A great number of studies in the general education field have reported that there is a strong relationship between teacher development and student learning (Falk, 2001; Grosso de Leon, 2001; Hamilton et al., 2003; Huffman & Thomas 2003; Ross & Bruce, 2006). These studies showed that

students' learning outcome data are necessary for professional development if they are to be validated as an effective instructional strategy. Thus, there is a need for research to link together effective physical education teacher development, student achievement, and growth.

Future Directions

Although there is a considerable amount of related studies conducted in the past decades, the authors propose that the following lines of research topics should be carefully examined to sharpen the focus of the field and provide the theoretical basis for the profession.

Physical Education Curriculum and Education Reform

Inclusive physical education — In Hong Kong, the inclusive education policy was initiated and implemented about a decade ago. However, little research has been done to examine this educational initiative. In physical education, according to some limited existing reports and professional observations, both pre- and in-service teachers do not feel confident to teach students with disabilities, depicting the picture of inclusive education as vague and unpromising. It is strongly recommended that collaborators including researchers, teacher educators, teachers, and parents should work as a team to study some urgent issues and questions surrounding their inclusion in general physical education including (i) support for the initiative, (ii) attitudes of students without disabilities, (iii) special training for general physical education teachers, (iv) and social isolation of students with disabilities.

Health issues and holistic schooling — A blueprint for the reform of the academic structure of a new senior secondary education was also proposed (CDC & HKEAA, 2007). One of the major changes to be promoted in both the primary and secondary physical education curricula is life-long healthy living; thus, teachers are required to develop relevant knowledge in preparation for the reform. Particularly, physical education teachers should play an important role in promoting an active lifestyle among their students — improving their generic skills and enhancing their interpersonal skills and knowledge at the same time. It is suggested that research studies focusing on bridging the gap between the ideal and reality should be conducted. Hong Kong physical educators tend to be quite

cynical to change because of the conflicts that persist with other subjects requiring reforms and their knowledge and skills required for the new curriculum, which are still underdeveloped (Johns, 2002; Johns et al., 2001). However, with the inclusion of physical education as an examination subject in the New Senior Secondary Curriculum (CDC & HKEAA, 2004, 2007), physical educators may consider examining how physical education in terms of its learning domains, which include affective and cognitive domains, could be linked to other learning experiences, such as higher-order thinking skills and leadership skills.

Research on Teaching and Learning

Student Learning — Instead of producing more research from the perspectives of policymakers and teachers, future research should shift their focus on student learning in terms of studying their interest, ability, learning difficulty, and achievements in physical education. Providing a more principled (formal curriculum) but flexible (hidden curriculum) approach to meet the needs of “individual difference” is urgently required. Physical educators should not expect to train all students to be professional but to participate instead.

Gender Issues — Another most frequently discussed topic is how boys and girls respond and learn physical activity differently. While most previous researches were conducted from measurement and biological points of view, perhaps it is timely to focus more on the social and cultural perspectives to provide a more comprehensive view on the gender issue. Physical educators should also be prepared for these differences and characteristics to prevent the “one-program-for-all” approach from repeating.

Research on Teacher Education

Initial Teacher Training — More future research should be focused on the why, what, and how of preparing both teacher educators and student teachers to become more reflective professionals, for example: (i) What academic knowledge and professional experience should be included in the initial training? (ii) How could the theory be linked to the gymnasium application? (iii) To what extent should student-teachers be educated in a certain approach and also be allowed room for creative thinking and innovative teaching?

Continuous Professional Development — The impact of professional development programs on in-service teachers support the viewpoint that teachers should receive different professional development programs at different career stages. Other research should address the following questions:

1. What makes the professional development of physical education teachers effective? What is the relationship between the principles of effective professional development and teacher change?
2. What roles do government policy plays in their efforts to improve teaching and learning in physical education? To what extent can teachers help special students (those with different levels of learning difficulties) learn in a general physical education setting under the inclusive education policy?
3. How should the problems associated with the practice of collaborative learning between organizations or teachers be resolved? For example, how can collaborative learning efficiently practiced? What are the criteria for the selection of particular collaborative learning strategies?

Final Remarks

After a thorough review, it was found that existing research studies are either quantitative (i.e., survey, fitness tests) and/or cross-sectional (one-off) in nature. It is clear that local researchers are more interested in investigating “what” happens within a single time frame and are less concerned with “why” and “how” the phenomenon evolves over time. It is believed that more qualitative (i.e., interviews, observational, diary, journal writing, etc.) longitudinal and collaborative studies among school administrators, policymakers, physical education teachers, researchers, and teacher educators should be implemented in the future. In addition, more research with a theoretical framework is urgently required to argue why certain beliefs, behaviors, and processes are related to teaching and student outcomes. As Yiannakis (1992) suggested, “Research that is not theoretically informed, not grounded in the existing body of knowledge, or of the ‘shotgun’ variety that fails to raise and investigate conceptually grounded questions, is likely to generate findings of a narrow and ungeneralisable value” (p. 8). Lastly, the use of a mixed method has grown greatly in the past decade in the West but not in Hong Kong. In particular, interpretive research methods have flourished, and studies using those

methods appear frequently in the physical education literature (Silverman & Ennis, 2003).

References

- Armour, K. M., & Yelling, M. (2007). Effective professional development for physical education teachers: The role of informal, collaborative learning. *Journal of Teaching in Physical Education, 26*(2), 177–200.
- Butler, J. (2005). TGfU pet-agogy: Old dogs, new tricks and puppy school. *Physical Education & Sport Pedagogy, 10*(3), 225–240.
- Butler, J., & McCahan, B. (2005). Teaching games for understanding as a curriculum model. In L. Griffin & J. Butler (Eds.), *Examining a teaching games for understanding model* (pp. 33–54). Champaign, IL: Human Kinetics.
- Chan, K. L., & Alberto, C. (2006). The effect of sport education on secondary six students' learning interest and collaboration in football lessons. *Journal of Physical Education and Recreation, 12*(2), 13–23.
- Chan, K. M., Li, J. X., Hong, Y. L., & Leung, S. F. (1998). Health benefits of exercise and diet control in children and adolescents — A Hong Kong and China perspective. In K. M. Chan & L. J. Micheli (Eds.), *Sports and children* (pp. 108–118). Hong Kong: Williams & Wilkins.
- Chan, W. K. (2005). Evaluation of development and reform in the physical education curriculum using the accountability system approach. *New Horizons in Education, 51*, 33–39.
- Chen, S., Lau, K.O., & Jin, M. (2006). Students' attitudes toward including students with disabilities in regular PE settings in Hong Kong and Taiwan. *Asian Journal of Exercise & Sports Science, 3*(1), 35–39.
- Chen, S., Zhang, J. B., & Liu, J. (2004). Educating children with disabilities in Hong Kong: Working in progress. *Proceedings of conference ICPE* (The International Commission on Physical Education) (pp. 489–498). Hong Kong: The Hong Kong Institute of Education.
- Cherubini, G., Zambelli, F., & Boscolo, B. (2002). Student motivation: An experience of in-service education as a context for professional development of teachers. *Teaching and Teacher Education, 18*(3), 273–288.
- Chin, M., Yang, J., & Masterson, C. (2003). Connections between physical education and physical best in Hong Kong, China: An alternative new model of innovative teaching in health-related fitness in Asia. *Journal of ICHPER-SD, 39*(3), 61–64.
- Chow, B., & Louie, L. (1992). A comparison of role perceptions of a successful physical educator among physical educator majors and established physical educators in Hong Kong. *Education Journal, 20*(1), 65–73.
- Chow, B., McKenzie, T., & Louie, L. (2008). Children's physical activity and environmental influences during elementary school physical education. *Journal of Teaching in Physical Education, 27*, 38–50.

- Cooper, P. A. (1993). Paradigm shifts in designed instruction: From behaviorism to cognitivism to constructivism. *Educational Technology*, 33(5), 12–19.
- Corbin, C. (1994). The fitness curriculum: Climbing the stairway to lifetime fitness. In R. R. Pate & R. C. Hohn (Eds.), *Health and fitness through physical education* (pp. 59–66). Champaign, IL: Human Kinetics.
- Cruz, A. (2000). Teaching behaviours among the primary physical education student teachers in Hong Kong. *Journal of Physical Education & Recreation (Hong Kong)*, 6(2), 31–42.
- Curriculum Development Committee. (1988). *Syllabus for secondary schools—Physical Education — Secondary 1–5*. Hong Kong: Government Printer.
- Curriculum Development Committee. (1995). *Syllabus for primary schools — Physical Education — Primary 1–6*. Hong Kong: Government Printer.
- Curriculum Development Council. (2002). *Physical Education: Key learning area curriculum guide (Primary 1 – Secondary 3)*. Hong Kong: Education Department.
- Curriculum Development Council & Hong Kong Examinations and Assessment Authority. (2004). *New Senior Secondary Physical Education curriculum (Draft-November)*. Hong Kong: Education and Manpower Bureau.
- Curriculum Development Council & Hong Kong Examinations and Assessment Authority. (2007). *Physical Education key learning area — Physical Education curriculum and assessment guide*. Hong Kong: Education and Manpower Bureau.
- Deglau, D., Ward, P., O’Sullivan, M., & Bush, K. (2006). Professional dialogue as professional development. *Journal of Teaching in Physical Education*, 25(4), 413–427.
- Dowson, C. (2000). Education reform in Hong Kong: Integration and inclusion. In K. F. Sin & S. W. Tao (Eds.), *Making integration successful: Empowering teachers for inclusive practice* (pp. 49–51). Hong Kong: The Hong Kong Institute of Education.
- Duncombe, R., & Armour, K. (2004). Collaborative professional learning: From theory to practice. *Journal of In-service Education*, 30(1), 141–166.
- Education and Manpower Branch & Education Department (1991). *The school management initiative: Setting the framework for quality in Hong Kong schools*. Hong Kong: Education Department.
- Education and Manpower Bureau. (2006). *Special education and special schools*. Retrieved February 9, 2009, from <http://www.ed.gov.hk/eng/service>
- Education Department. (1996). *Code of aid for special schools*. Hong Kong: Government Printer.
- Education Department. (2002). *Special education and special schools*. Retrieved February 9, 2009, from <http://www.ed.gov.hk/eng/service>
- Ennis, C. D. (1992). Curriculum theory as practiced: Case studies of operationalized value orientation. *Journal of Teaching in Physical Education*, 11, 358–375.
- Eston, R. G., Ingledew, D. K., Fu, F. H., & Rowlands, A. (1998). A comparison of health-related fitness measures in 7- to 15-year olds in Hong Kong and North Wales. In K. M. Chan & L. J. Micheli (Eds.), *Sports and Children* (pp. 119–132). Hong Kong: Williams & Wilkins.

- Falk, B. (2001). Professional learning through assessment. In A. Lieberman & L. Miller (Eds.), *Teachers caught in the action: Professional development that matters*. New York: Teachers College Press.
- Freiberg, J. (Ed.). (1999). *Beyond behaviorism: Changing the classroom management paradigm*. Boston: Allyn & Bacon.
- Fu, F. H. (1988). School physical education in Hong Kong. *Physical Education Review*, 11(2), 147–152.
- Fu, F. H. (1990). Delivery of physical education and sport programmes in the People's Republic of China and Hong Kong: Comparative analysis. *Journal of the International Council for Health, Physical Education, Recreation, Sport, and Dance*, 26(2), 10–15.
- Fu, F. H. (1999). Learning strategies of students in physical education classes. *Educational Research Journal*, 14(2), 191–208.
- Fung, L., Ha, A. S., & Fu, F. (1993). Attitudes toward physical education: An investigation among in-service and pre-service physical educators in Hong Kong. *Journal of International Council for Health, Physical Education, and Recreation*, 29(4), 27–30.
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915–945.
- Griffin, L., & Butler, J. I. (2005). *Teaching games for understanding: Theory, research, and practice*. Champaign, IL: Human Kinetics.
- Grosso de Leon, A. (2001). *Higher education's challenge: New teacher education models for a new century*. New York: Carnegie Corporation of New York.
- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and teaching: Theory and Practice*, 8(3/4), 381–391.
- Ha, A. S. (1996). A descriptive study of pre-service and in-service physical educators' teaching behaviors in Hong Kong. *Education Journal*, 24(2), 45–56.
- Ha, A. S. (1999). Relationship between teacher behaviors and students academic learning time in junior secondary physical education. *Educational Research Journal*, 14(1), 73–84.
- Ha, A. S. (2001). Relationship of teacher task presentation and student learning performance in basketball. *The Hong Kong Journal of Sports Medicine and Sports Science*, 12, 52–63.
- Ha, A. S., Butler, J. I., Pratt, D. D., & Collins, J. B. (2008, May). *Teaching games for understanding: A study of Hong Kong prospective physical education teachers' beliefs, intentions and actions in teaching*. Paper presented at the 4th International Conference — Understanding Games: Enhancing Learning in Teaching and Coaching, Vancouver, Canada.
- Ha, A. S., & Fishburne, G. (2006). The role of the school in promoting healthy and active lifestyles among Hong Kong school children. In D. Johns & K. Lindner (Eds.), *Physical activity and health of Hong Kong youth* (pp. 219–235). Hong Kong: The Chinese University Press.

- Ha, A. S., Johns, D. P., & Fung, W. M. (2001). Effect of instructional format on appropriate time in motor skills, heart rate intensity and exercise enjoyment of students. *Educational Research Journal*, 16(2), 239–255.
- Ha, A. S., Johns, D. P., & Shiu, E. S. (2003). Students' perspective of the physical education curriculum in Hong Kong. *The Physical Educator*, 60(4), 194–202.
- Ha, A. S., Keh, N. C., & Xu, B. L. (2007). A comparative study on value orientation of physical education teachers among Hong Kong, Taiwan and Shanghai. *International Journal of Eastern Sports and Physical Education*, 5(1), 141–151.
- Ha, A. S., Lee, J. C., Chan, W. K., & Sum, R. K. (2004). Teachers' perceptions of in-service teacher training to support curriculum change in physical education: The Hong Kong experience. *Sport, Education and Society*, 9(3), 421–438.
- Ha, A. S., Macdonald, D., & Pang, B. (in press). Parental perspectives on physical activity in the lives of Hong Kong Chinese children: The interplay of Confucianism and postcolonialism. *Sport, Education and Society*.
- Ha, A. S., Pang, A. C., & Cheung, C. K. (2004). Perceptions of physical education learning environment of Hong Kong children. *International Journal of Eastern Sports and Physical Education*, 2(1), 49–58.
- Ha, A. S., Wong, A. C., Sum, R. K., & Chan, W. K. (2008). Understanding teachers' will capacity to accomplish physical education curriculum reform: The implications for teacher development. *Sport, Education and Society*, 13(1), 77–95.
- Hamilton, L. S., McCaffrey, D. F., Stecher, B. M., Klein, S. P., Robyn, A., & Bugliari, D. (2003). Studying large-scale reforms of instructional practice: An example from mathematics and science. *Educational Evaluation and Policy Analysis*, 25(1), 1–29.
- Harrison, J., Blakemore, C., Buck, M., & Pellett, T. (1996). *Instructional strategies for secondary school physical education* (4th ed.). Chicago: Brown & Benchmark.
- Hellison, D. R. (1995). *Teaching social responsibility through physical activity*. Champaign, IL: Human Kinetics.
- Hellison, D., & Templin, T. (1991). *A reflective approach to teaching physical education*. Champaign, IL: Human Kinetics.
- Huffman, D., & Thomas, K. (2003). Relationship between professional development, teachers' instructional practices, and the achievement of students in science and mathematics. *School Science and Mathematics*, 103(8), 378–387.
- Hui, S. S. (2004). Current perspectives on health and physical activity in Hong Kong: A review. *Journal of Physical Activity and Health*, 1, 56–70.
- Jewett, A. E. (1994). Curriculum theory and research in sport pedagogy. *Sport Science Review*, 3(1), 56–72.
- Jewett, A. E., & Bain, L. L. (1985). *The curriculum process in physical education*. Dubuque, IA: Wm. C. Brown.
- Jewett, A. E., Bain, L. L., & Ennis, C. D. (1995). *The curriculum process in physical education* (2nd ed.). Madison, WI: Brown & Benchmark.
- Johns, D. (2002). Changing curriculum policy into practice: The case of physical education in Hong Kong. *The Curriculum Journal*, 13(3), 361–385.

- Johns, D. (2003). Changing the Hong Kong physical education curriculum: A post-structural case study. *Journal of Educational Change*, 4, 345–368.
- Johns, D., & Dimmock, C. (1999). The marginalization of physical education: Impoverished curriculum policy and practice in Hong Kong. *Journal of Educational Policy*, 14(4), 363–384.
- Johns, D., & Ha, A. S. (1999). Home and recess physical activity behaviours of Hong Kong children. *Research Quarterly for Exercise and Sport*, 70(3), 319–323.
- Johns, D., Ha, A., & Macfarlane, D. (2001). Raising activity levels: A multidimensional analysis of curriculum change. *Sport, Education and Society*, 6(2) 199–210.
- Johns, D., & Shuttleworth, J. (1996). Present practices, future discourses: Addressing context and relevancy of contemporary professional practice. *Journal of Primary Education*, 6(1&2), 57–65.
- Kirk, D. (1988). *Physical education and curriculum studies*. New York: Croom Helm.
- Kirk, D. (2004). New practices, new subjects and critical inquiry. In J. Wright, D. Macdonald, & L. Burrows (Eds.), *Critical inquiry and problem-solving in physical education* (pp. 199–208). London: Routledge.
- Kirk, D., & Macdonald, D. (1998). Situated learning in physical education. *Journal of Teaching in Physical Education*, 17, 376–387.
- Kirk, D., & MacPhail, A. (2002). Teaching games for understanding and situated learning: Rethinking the Bunker-Thorp Model. *Journal of Teaching in Physical Education*, 21(2), 77–92.
- Lee, A., Tsang, C., Lee, S. H., & To, C. Y. (2003). A comprehensive “Healthy Schools Programme” to promote school health: The Hong Kong experience in joining the efforts of health and education sectors. *Journal of Epidemiology and Community Health*, 57, 174–177.
- Leung, S., Lee, W., Lui, S., Ng, M., Peng, X., Luo H., Lam, C., & Davies, D. (2000). Fat intake in Hong Kong Chinese children. *American Journal of Clinical Nutrition*, 72 (suppl.), 1373S–1378S.
- Li, C. (2000). Professional socialization of pre-service physical education teachers in the Hong Kong Institute of Education. *Journal of Physical Education and Recreation*, 6(2), 15–25.
- Li, C., & Cruz, A. (2006). Learning to teach games for understanding: Experiences from four pre-service PE teachers in the Hong Kong Institute of Education. In R. Liu, C. Li, & A. Cruz (Eds.), *Teaching games for understanding in the Asia-Pacific Region* (pp. 25–36). Hong Kong: The Hong Kong Institute of Education.
- Lindner, K. J. (1998). Physical education and sport science in Hong Kong. *ICSSPE/CIEPSS Bulletin*, 24, 31–32.
- Liu, Y. K. (1994). Innovation of games teaching. *Journal of Primary Education*, 4(2), 43–48.
- Liu, Y. K. (1997). Games teaching: Changed or unchanged? *Educational Research Journal*, 12(1), 30–35.
- Liu, Y. K. (2002). *Games teaching: Teaching games for understanding*. Hong Kong: The Hong Kong Institute of Education.

- Liu, Y. K. (2004). Teaching games for understanding: Implementation in Hong Kong context. *Proceedings of the 2nd International Conference: Teaching Sport and Physical Education for Understanding* (pp. 53–61). Melbourne: University of Melbourne.
- Locke, L. (1992). *The name of the game: How sports talk got that way*. White Hall, VA: Betterway Publications.
- Lonsdale, C., Sabiston, C. M., Raedeke, T. D., Ha, A. S., & Sum, R. K. (2009). Self-determined motivation and students' physical activity during structured physical education lessons and free choice periods. *Preventive Medicine, 48*(1), 69–73.
- Macfarlane, D. (1997). Some disturbing trends in the level of habitual physical activity in Hong Kong primary school children: Preliminary findings. *Hong Kong Journal of Sports Medicine, 5*, 42–46.
- Macfarlane, D., & Wong, T. K. (2003). Children's heart rates and enjoyment levels during PE classes in Hong Kong primary schools. *Pediatric Exercise Science, 15*, 179–190.
- MacPhail, A., Kirk, D., & Griffin, L. (2008). Throwing and catching as relational skills in game play: Situated learning in a modified game unit. *Journal of Teaching in Physical Education, 27*(1), 100–115.
- Metzler, M. (2005). *Instructional models for physical education* (2nd ed.). Boston: Allyn & Bacon.
- Morris, P. (1995). *The Hong Kong school curriculum: Development, issue and policies*. Hong Kong: Hong Kong University Press.
- Morris P., & Sweeting, A. (1991). Education and politics: The case of Hong Kong from an historical perspective. *Oxford Review of Education, 17*(3), 249–267.
- National Association for Sport and Physical Education. (1995). *Moving into the future: National standards for physical education, A guide to content and assessment*. Reston, VA: Author.
- Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide*. Malden, MA: Blackwell Publishing.
- Piaget, J. (1970). *Biology and knowledge: An essay on the relations between organic regulations and cognitive processes*. Chicago: University of Chicago Press.
- Pratt, D. D., & Collins, J. B. (2000, June). *The teaching perspectives inventory (TPI)*. Paper presented at the 41st Annual Adult Education Research Conference, The University of British Columbia, Vancouver, B.C.
- Richardson, V. (1997). *Constructivist teacher education: Building new understandings*. Washington, DC: Falmer Press.
- Rink, J. (2001). Investigating the assumptions of pedagogy. *Journal of Teaching in Physical Education, 20*, 112–128.
- Rink, J. (2006). *Teaching physical education for learning* (5th ed.). New York: McGraw-Hill.
- Rodriguez, A. J., & Berryman, C. (2002). Using socio-transformative constructivism to teach for understanding in diverse classrooms: A beginning teacher's journey. *American Educational Research Journal, 39*(4), 1017–1045.

- Ross, J. A., & Bruce, C. D. (2006, April). *The impact of a professional development program on student achievement in grade 6 mathematics*. Paper presented at the Annual Meeting of the American Educational Research Association (AERA), San Francisco.
- Shiu, E. W., & Ha, A. S. (2001). Planning patterns and instructional behaviours on student achievement between novice and experienced physical educators. *Research on World Chinese Physical Education*, 2(4), 1–15.
- Siedentop, D. (1992). Thinking differently about secondary physical education. *Journal of Physical Education, Recreation and Dance*, 63(7), 69–72.
- Silverman, S. J., & Ennis, C. D. (2003). *Student learning in physical education: Applying research to enhance instruction* (2nd ed.). Champaign, IL: Human Kinetics.
- Tinning, R. (1991). Teacher education pedagogy: Dominant discourses and the process of problem setting. *Journal of Teaching in Physical Education*, 11(1), 1–20.
- Vertinsky, P., McManus, A., & Sit, C. (2007). “Dancing class”: Schooling the dance in colonial and post-colonial Hong Kong. *Sport, Education and Society*, 12(1), 73–92.
- Vertinsky, P., McManus, A., Sit, C., & Liu Y. K. (2005). The gendering of physical education in Hong Kong: East, west or global? *The International Journal of the History of Sport*, 22(2), 816–839.
- Villegas-Reimers, E. (2003). *Teacher professional development: An international review of the literature*. Paris: International Institute for Educational Planning, UNESCO.
- Vygotsky, L. S. (1978). Mind in society: The development of higher mental processes. (M. Cole, V. John-Steiner, S. Scribner, & E. Soubberman, Eds.). Cambridge, MA: Harvard University Press.
- Wong, A., & Louie, L. (2002). What professional teachers can learn from the practicing physical education teachers? *Physical Educator*, 59(2), 90–103.
- Wright, J. (2004). Critical inquiry and problem-solving in physical education. In J. Wright, D. Macdonald, & L. Burrows (Eds.), *Critical inquiry and problem-solving in physical education* (pp. 3–15). London: Routledge.
- Yiannakis, A. (1992). Toward an applied sociology of sport: The next generation. In A. Yiannakis & S. L. Greendorfer (Eds.), *Applied sociology of sport* (pp. 3–20). Champaign, IL: Human Kinetics.
- Zozakiewicz, C., & Rodriguez, A. J. (2007). Using sociotransformative constructivism to create multicultural and generinclusive classroom. *Educational Policy*, 21(2), 397–425.
- 亦言 (1996)。〈香港體育整體發展規劃中的學校體育：中國學校體育〉。《中國學校體育》，第 5 期，頁 72–73。
- 何敬恩 (1997)。〈英國殖民地教育政策和香港的體育教育〉。《體育科學》，第 4 期，頁 27–29。
- 招樂輝、何稀翎、李雁南 (1996)。〈港澳臺地區學校體育物質條件與體育師資的比較研究〉。《廣州體育學院學報》，第 3 期，頁 58–66。
- 馬宜建 (1997)。〈香港體育的過去、現在與未來〉。《體育科學》，第 3 期，頁 10–18。
- 陳雁楊、關文明 (2000)。〈香港體育的現狀及其發展方向〉。《社會體育》，第 5 期，頁 104–107。

廖玉光、楊靜珍、錢銘佳（1998）。〈「領會教學法」的思路——球類運動項目教法新趨向〉。《中國學校體育》，第3期，頁28-29。

廖玉光、劉錦新、錢銘佳（1994）。〈「領會教學法」在香港球類教材教學中的個案研究〉。《中國學校體育》，第4期，頁58。