The negotiated Project-based Learning: Understanding the views and practice of kindergarten teachers about the implementation of Project Learning in Hong Kong

Abstract

A global trend towards formulation of curriculum has emerged over the past decade. The concepts of project approach aroused growing attention, and many literatures had indicated its benefits to children. It is believed that to achieve these potential benefits of project learning, teachers needed to formulate a curriculum that follows the interests of children, to design appropriate activities, to build a good relationship with children and help them in the process of learning. The study revealed that teachers were positive towards the impact of project learning on children's experience but fell back to a traditional way of implementing curriculum.

Key words

Curriculum innovations, Project learning, Early Childhood Curriculum, Teacher belief

Introduction

Over the past decade, a global trend towards formulating early childhood curriculum has emerged. Simply put, young children are expected to learn through experience, application, and conversation in community, physically or virtually, with peers, parents, teachers, and other adults. All-rounded skills will be expected as children will develop their own knowledge and understanding of the topic through applying and adapting existing knowledge in project learning. Learning is built on interaction with other children, adults and the learning environment. The learning activities proposed or chosen are to stimulate play, creativity and joyful learning, and the interest of children in learning to master new experiences, knowledge and skills. These concepts are of growing interest in communities of practice and curriculum formulation. The extent of its implementation differs in various contexts.

Project-based learning flourishes in Reggio Emilia schools (Katz & Chard, 2000). The Reggio curriculum is founded on projects (Katz, 1994). Teachers often work on projects with small groups of children, while the rest of the class engages in a wide variety of self-selected activities. Project topics may derive directly from teacher observations of children's spontaneous play and exploration or social concern on the part of teachers or parents. Projects begin with teachers observing and questioning children about the topic of interest. Based on children's responses, teachers introduce materials, questions, and opportunities that provoke children to further explore the topic. Projects often move in unanticipated directions as a result of problems children identify. Thus, open-ended and often long-term projects are based

on the reciprocal nature of teacher-directed and child-initiated activity. When exploring a project, the key is not what the teacher knows or understands about the subject, but how to 'help' the children explore their ideas themselves. The teachers ask questions so the children can explore for themselves. It is not necessary for the children to the 'right' answer or information, but to help them find a solution that works for them. This approach emphasizes the teacher's responsiveness to the individual children as well as the whole group in her class (Katz and Chard (2000). Following the three phases of Beginning, Investigation, and Culmination, teachers respond to the children's curiosity to make project work generative as well as engaging (Helm & Katz, 2001; Katz & Chard, 2000). Teachers then document in their discussions with children (Amoriggi & Mesher, 2001)

Project learning has been defined in many ways which is reflecting its richness and the many possibilities that it could offer. There are different definitions in different field. In Ribe & Vidal's statement (1993), project means 'a large task composed of smaller steps'. Thus, the process of the project work is extremely important. According to Rothenberg (1998), project learning is to let "students learn by working on complex, open-ended, real world project", which means it would let students understand certain trend more closely and interact with the reality. Further, project learning is defined as a kind of learning and teaching strategy that usually starts with a high level question, which is very challenging and involves students in lots of skills such as planning, reading, observing, judging, enquiring, communicating and theorizing (Haines, 1989). On the other hand, some Asian researchers such as one from East China Normal University in Shanghai define "project learning" in the broad sense and narrow sense (Huo, 2001). In the broad sense, project learning is a kind of activity that is student-oriented and uses their own ability to deal with the problems under teacher's guidance. In the narrow sense, students are required to identify and choose an exploration or a topic that is relevant to their daily lives or in social contexts and use their own knowledge which is self-initiated. Moreover, that knowledge could apply for the content knowledge and those problems could be solved by inquiry and the quasi-scientific research methods.

The premise of the concept of project approach starts from the assumption that through dialogue, communication and interactions, children acquire the awareness of their capacity to think, to have an opinion and to build "knowledge", that is, to think and interpret reality. Project approach, conceived as a path or journey, is a voyage of discovery that sustains human competences as fundamental values for knowledge and for life. It implies a curriculum that favours learning – learning to learn through experimentation with many different contents and forms, and learning through reflection with others and self-reflection. Teachers are encouraged to facilitate children's course of their own investigations and learning, and in-depth studies of concepts, ideas and interests which arise within the group.

Considered as an adventure, projects may last one week or could continue throughout the school year.

Throughout project learning, teachers help children make decisions about the direction of learning, the ways in which the group will research the topic, the representational medium that will demonstrate and showcase the topic and the selection of materials needed to represent the work. From their experience and knowledge of children, the teaching staff will formulate what many describe as an "emergent curriculum" that follows the interests of children. The development and implementation of emergent curriculum is through the negation and cooperation of the teachers and students, meanwhile the value, meaning and spirit embedded in the curriculum come into being through the mutual understanding of teachers and students. Project learning is hypothesized to be characterized by a wide array of educational resources and objectives that are flexible and adapted to the particular needs and desires of each group of children. While it is often the children who lead and learn to propose, teachers assume the responsibility to sustain the cognitive and social dynamics of the group while they are in progress, and to provide at all moments suitable learning resources for the children. These resources include not only the space and materials for learning, but also the organization of situations and occasions, including the participation of families. The teacher has the responsibility of establishing a genuine personal and pedagogical relationship with each child. The activities proposed or chosen stimulate creativity and joyful learning, and use the interest of children in learning and mastering new experiences, knowledge and skills.

There are many countries applying project learning in education. There are some similarities and differences in practice and learning effectiveness found in various countries. In the United States, Shepherd (1998) reported that project learning had positive effect on students' acquisition of critical thinking skills. In the study of a nine-week project, students were required to work on defining and finding solutions for housing problems in six countries. The result had shown an improving performance of students on the test on critical thinking skills. On the other hand, Barron and Schwartz *et al.* (1998) found that students would have positive changes in work habits under the project-based approach. In their follow-up interviews of a study, students were found that they take the chances to consult available resources and to revise their work-behaviors that were uncharacteristic of these students prior to the project learning.

In the study of Chicago, Bartscher and Gould *et al.* (1995) found that project learning would promote students' motivation to learn. In their study, students who were identified as low in motivation got a great improvement after participating in project work. Students also

claimed that project helped motivate them and let them increase their interest in the topics involved. In UK, Boaler (1997) found that project learning approach could enhance students' problem solving capabilities. Under traditional mathematics training, students were taught a formal and didactic model that was of little use on complex problems. On the contrary, students who were taught in a more open, project-based model were found to have developed a more flexible and useful form of knowledge of mathematics, and could apply this knowledge in a range of new contexts.

Project learning could enhance students' self-directed learning, self-regulated learning and self-reflected learning. Besides, it would develop children's confidence, empower their self-esteem and is more effective in yielding various learning styles or "multiple intelligence" than findings recorded in the traditional instructional model (Gardner, 1991, Diehl & Grobe *et al.*, 1999). Moreover, project learning could let children stress on the authenticity and relevance of activities to their daily lives. As children need to take responsibility to work on their own duties, project learning would help them learn how to work individually and at the same time cooperate with other children. Children would adopt an enquiry approach to discover and construct knowledge under project-based approach as they need to find lots of information to fulfill the requirement. Based on Philips and Burwood *et al.*'s research finding (1999), all-rounded skills would be developed within the framework of the project work.

Whether students could benefit from project work depends largely on how teachers make it. Teacher would guide the children's work as children need to do their project by themselves such as acquiring the information, choosing the suitable ways to present their project. Since children got a larger freedom than the traditional way, teachers need to guide them when they are becoming confused. Besides, teachers need to strengthen children's proficiencies on what they already know, provide the progress of the project at an independent level, and let students get involved in planning and execution of project through a series of tasks. Furthermore, teachers need to provide many opportunities for children to read and write independently that children would become active learners, ensure children get the feeling of success that let them know they are capable of exploring and enjoying the task, and encourage children to take risk throughout the project as error and failure is a natural part of the child development.

Although most early childhood educators recognize and practice some kinds of project learning, evaluation or research has not yet examined the implementation of the "new" curriculum. This also applies to the early childhood sector in Hong Kong. What does project learning mean for early childhood teachers? How do teachers implement new curriculum

approaches in early childhood setting? These questions are of great importance and this paper will shed light on the ongoing practices as well as to explore future directions in the field.

Background

There are about 8000 early childhood teachers in Hong Kong. Kindergarten teachers in Hong Kong are often criticized for not putting early childhood education theory into practice after their in-service training in the last decade (Li, 2004b). It might suggest that kindergarten teachers have difficulties in coping with reform that advocates child-centered teaching approaches and active learning as the idealized vision of early childhood education.

With the launch of large-scale in-service training programmes – the Blister Programme (1994-99) and the Voucher Scheme 2007 (Li, 2009), thousands of teachers received in-service training (Li, 2004a). Before 2007, 90% of kindergarten teachers were trained by programs offered by the Hong Kong Institute of Education. Currently, 80 % of teachers are trained by the Hong Kong Institute of Education while 20% of teachers are trained by the Institute of Vocational Education, the School of Continuous Professional Development of the Baptist University and a small cohort of evening program run by the Chinese University of Hong Kong. Kindergarten teachers received initial in-service training during 1985-1999 to obtain Qualified Kindergarten Teacher Education (QKT) qualifications. In 1995, an in-service Certificate of Kindergarten Education Programme (CE) for kindergarten principals and head teachers (with QKT qualifications) was introduced. In 1998, the Pre-service Certificate of Early Childhood Teacher Education Program, a three-year, full-time programme, was introduced in Hong Kong. Hundreds of kindergarten teachers were enrolled in the Bachelor of Education (Early Childhood Education) in each cohort after 2007, with the provision of teacher professional development allowance in the Voucher Scheme. New ideas were brought back to schools and have been introduced to schools over the last 15 years. To date, there was a general consensus that the 3-year Certificate (renamed Diploma in 2009) of Teaching should be the benchmark qualification for licensing purposes. It includes a 3 credit-point course (30 hours training) titled Project Learning in Kindergartens. Students are introduced to a brief background of the Project Approach, including theoretical perspectives, where this approach had come from, how others had used it; and "The Project Approach Around the World" and the context of research done internationally and implication of their work for practice; linking them to contemporary issues in ECE and the significance of the work to educators and policy makers elsewhere; as well as ways teachers can implement the new curriculum approaches in their kindergarten classrooms.

All kindergartens are privately run. Before 2007, kindergartens can have their own salary scale and curriculum. Starting from 2007, kindergartens tend to observe the recommended

salary scale and curriculum if they want to join the Voucher Scheme. Around 90% of kindergartens (755 kindergartens are in the voucher scheme) are subsidized by the government under the Voucher Scheme and are under the supervision of the Education Bureau after 2007.

Against this background, and in the context of a curriculum reform that foresaw seamless education continuity from birth to tertiary education "leading to a competitive and efficient workplace", the Curriculum Development Institute issued the Guide for Pre-primary Curriculum in 2006, the guiding principles for an early childhood curriculum. Though clearly formulating learning goals, the Guide is more a regulation than a detailed curricula guideline as found in other countries. How schools and centres achieve the goals of the curriculum is their responsibility, but the content and range of these goals are now clearly set out and the urge for active learning and whole-child development is clearly stipulated. Kindergartens claim that they organize contexts for children's learning across subject boundaries through themes and topics in a way that reflects the cohesiveness of learning required to meet the demands of the 'curriculum'. However, new methods are sometimes viewed as alternative ways of achieving traditionally defined goals.

In the innovation age of education, project learning is adopted worldwide and particularly for the learning and teaching in early child education. Such an approach supports students in their quest for understanding when they are encouraged to acquire knowledge and learn beyond the prescribed teaching agendas. Presumably, this is in contrast with most kindergartens in Hong Kong, which are used to make textbooks their dominated materials for lessons. Early childhood teachers in Hong Kong are facing the change and yet changes are viewed as something "natural" where little staff education has been in place.

In order to support and investigate the implementation of project learning in Hong Kong kindergartens, a school support project named "Research on the Advantages of Project Learning and the Implementation of Project Learning in Early Child Education with particular research interest on the Utilization of Resources in the Internet" ("The Project") funded by a private grant was carried out between 2007 and 2009. The study was to explore the views and practice of project learning among pre-school teachers in Hong Kong, and to examine the extent of emergent vision and innovations being adopted in practice on how to utilize technology in early childhood setting. It included aspects of the application of project approach through the utilization of resource on the Internet. Open invitations were sent to kindergartens in Hong Kong and 51 schools (out of 600 kindergartens, excluding international kindergartens and kindergartens affiliated to Institutions, in the voucher scheme)

consented to join the study. The research data recorded signs of teachers' preferences of adopting and incorporation of project learning and e-learning in Hong Kong kindergartens.

The Project was carried out in two sub-projects, Project I (studying the implementation of project learning) and Project II (studying the implementation of e-learning). Project I and Project II ran at the same time, for duration of two years from February, 2008 to February, 2010. The aim of Project I was to understand the development of project learning in kindergartens by using survey questionnaires, classroom observation and post-observation interview. For the purpose of this paper, only a portion of the data is presented from the larger study due to space constraints.

Methodology

129 principals and teachers from 51 kindergartens participated in the questionnaire survey on the views and implementation of project learning while 10 kindergartens participate as Core Group Schools of which classroom practice was observed. The 129 participants in the questionnaire survey were all female teachers who had teaching experience spanning from less than 5 years to over 10 years. 17.8% had less than 5 years, 19.4% had 6 to 10 years while 62.8% had over 10 years' experiences. 6.5% of the participants were QKT holders while 44.9% of the participants were CE holders, all were sub-degree graduates except for 8.6% of the participants who had undergraduate and post-graduate teacher training. The participants in the study represented schools from a general cross section of the Hong Kong community (urban, sub-urban areas and new towns).

Questionnaire survey and video recordings of classroom practice of the participants were the primary tools for data collection. A survey questionnaire on the views and implementation of project learning was administered to the participants in October, 2008. The anonymity of the individuals who participated was protected by the use of pseudonyms. On the other hand, recording of classroom practice focused on the curriculum, children's learning experiences, the teachers' instructional strategy, and the classroom organization. Field notes were made during the observations and written into a narrative account the next day. Data were organized according to themes in the form of summaries of words taken directly from the data or conceptualization of the data (Strauss & Corbin, 1990). Similar data were grouped and given conceptual labels. This was followed by attempts to interpret these conceptualisations. The concepts were related by means of statements of relationship. The illustrative material was meant to give a sense of what the observed world was really like, while the interpretations were meant to represent a more detached conceptualisation of that reality (Strauss & Corbin, 1990). Semi-structured post-observation (video-recording) interview were also studied. Results and findings were disseminated to participating schools

and teachers. Feedback from schools and teachers would help to ensure the subjectivity of the interpretation of their views and daily practice. Two specific questions framed the following discussion:

1. What are the views of Hong Kong kindergartens teachers on project learning?
2. Is there a general pattern of practice among kindergarten teachers adopting project learning?

Findings

The study revealed that teachers were positive towards the impact of project learning on children's experience but fell back to a more traditional way of implementing curriculum. Participants were aware that many of the better curricula were based on the principle that young children's learning and growth ought to be focused on creating meaning, that is, on developing an understanding of different aspects of the world around them. There were signs that teaching was delivered in modes of abundant content, tight schedule, and detailed lesson plan.

Positive views towards the impact of project learning

In the present study, 96.9% of the participants reported that project approach was beneficial to early children and 97.7% of the participants agreed that project approach was child-oriented. On the other hand, 99.2% of the participants claimed that project approach could construct a variety of and meaningful early childhood learning environment. More than 95% of the participants reported that "project approach" was beneficial to early childhood.

Further, 98.4% of the participants reported that "project learning" focused on children's self learning and teachers took up the role of facilitators to allow children to explore themselves and project learning approach could enhance teacher-child interactions. 83.7% of the participants agreed that "project learning approach" would enhance class spirit positively. 94.6% of teachers reported that "project learning approach" could give teachers to access children's learning needs.

When asked about the merits of project learning for children, 30.2% of the participants in this study rated that project learning approach would enhance early child's critical thinking ability, creativity and self-learning; and then 24% of the participants found it useful for catering for individual interest; and followed by 14% of the participants found it good for pupil-teacher interactions; 11.6% of the participants found it good for whole child development; 10.9% of the participants found it helped children to expose to different learning styles while keeping individual learning styles; 5.4% of the participants found it

useful for building up confidence; 3.9% of the participants did not indicate the significance of project learning to children.

In general, the participants in this study agreed that project learning would facilitate children's learning through interactions, creating meanings, understanding the world around us, technology which enhanced different aspects of learning/skills, joyful learning, cooperation, looking for information, active learning, independent learning, motivation, integration of content, teachers' guide to get information, strengthening the already known, provision of all-rounded knowledge.

When asked about the themes for project learning, most of the participants (72%) found that daily lives related themes, such as family, food and games were topics that interest children most. Next to it was transportation (9.3%), hospitals and shops (4.7%), festivals and celebrities (3.9%) and natural science such as water, wind and plants (3.0%), seasons (1.6%) and other 7 different options (5.5%) are other suitable topics that could be taught by the "project learning approach". This research finding is relevant to overseas researches that those topics come with children's daily life that is most absorbable for the kids. In general, the themes were rather similar to what teachers were using in the past ten years.

Learning environment

From the videos of classroom practice, there were plentiful teaching content/materials, activity-based learning, discussions held by teachers with children, and teachers getting responses from children. However, the learning environment might not be favourable for children's exploration of information.

From the observation, teachers tended to deliver teaching content step by step by referring to a detailed lesson plan on their desk. The teaching content was decomposed into smaller parts to be delivered in 5 to 10 days. For instance, for the themes "Understanding Our Teeth" and "Tortoises",

> [School 3] K1 children counted the number of teeth and view their teeth through a mirror in the first day. They then tried to eat bananas, apples, biscuits, and hard bread to get to know it was easier to have a bite on bananas and biscuits than on apples and hard bread the following day. On the third day, they would view videos about teeth of animals and get to know different animals had different shapes of teeth. On the fourth day, children would explore the differences and functions between human and animal teeth and had a discussion. On the fifth day, children would learn to keep healthy teeth.

> [School 8] K3 children viewed a lot of pictures and photos about tortoises on the first day. They would try to gather more information from newspapers and magazines about tortoises the following day. On the third day, they shared their information with group mates and classmates. On the fourth day, children viewed a video on tortoises laying eggs and went back to the sea and had a discussion on what would happen to the eggs. On the fifth day, children viewed the second part of the video about the eggs and the birth of baby tortoises and had a discussion on what would happen to the baby tortoises. On the sixth day, children viewed the third part of the video about a huge number of eggs were eaten or destroyed by animals and the survived became baby tortoise which swam into the sea. Children had a discussion on the fate of eggs and baby tortoises. On the seventh day, children viewed the fourth part of the video and knew that only 10% of baby tortoises would survive and swam back to the same place to lay eggs when they grew up. On the eighth day, children viewed the final part of the video and knew that there were fewer and fewer tortoises in the world and we would need to protect the tortoises before they disappeared. On the ninth and tenth day, children tired to think over the idea of environmental protection and ways to save the natural environment.

It seems that teachers had a high concern for teaching preparation, a common feature recorded ten years ago (Li, 2004b), when they were asked to implement Project Learning. The teaching content was sequenced in a way that the content was related and articulated throughout the duration of project learning. Children were provided some opportunities to discuss with peers. Children were guided by teachers to get information in each task.

While at Free Choices time, edutainment games were set as a learning activity to be chosen by children at learning corners. This was a new option for children at group activity time (Li, 2006). Teachers tended to talk briefly with children at the learning corners to see if children had difficulties in monitoring the progress of their work. However, there were little signs that teachers took responsibility to sustain the cognitive and social dynamics of the group.

Teachers did mentioned virtual learning environment but neither mention ideas/incidents of how they use virtual leaning environment, nor incidents of children's experimentation with contents, feeling success and taking risks in the post-observation interview.

<u>Old practices remained</u>

From the observation, there was a lot of information the teacher intended to deliver and teachers asked a lot of questions to prompt children's answers. The practice was a kind of general practice in kindergartens that were blamed for practicing teacher-directed teaching (Li, 2004a; Li, 2006) and in classrooms implementing project learning in this study. For example,

> Teacher 1 asking a child getting ready to view her teeth from a mirror at hand: "What can you see from the mirror? ... What are inside your month? … How many teeth do you have? … Can you count them to me? ...What's the colour of your teeth? ... What's the shape of your teeth? ... What's the use of teeth? … How can teeth help you to eat? …"
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> Teacher 34 showing children some photos and pictures:
> "What can you see from the pictures? … What do you call them? ... Have you ever seen one of them? ... Do you like them? ... Where can we see tortoises? …What's the color of the tortoises? ... Are they big? ... Can you see the tiny box on the back of this tortoise? … Would you like to look for more information about them from these newspaper clips and magazines? ..."
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> Teacher 71 starting a conversation on Toys with children:
> "What are these? ... Where can we get these? … Which one do you like most? ... Tell me the toys you have at home? ... How often do you go to toy shops? ... If you're asked to bring back some old toys, what will you bring back? ... Would you like to share the toys with other classmates? ... Would you feel happy to share your toys with your classmates? ..."
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> Teacher 100 showing children some photos and pictures and starting a conversation on Environmental Protection:
> "How do you find the places? … Is it too dirty? ... Why is it so dirty? … Do you like these places? … How can we keep the environment clean? … What will you do after having a barbecue? … What will you do if you have used papers, clothes and bottles …?" … The teacher showed children photos and pictures of beautiful beaches, clean barbecue sites, clean streets … and asked "Do you like these places? … Are they lovely? …"

Children were to respond to a string of questions and supposed to learn each bit accordingly. Teachers used questions instead of telling to transmit teachers' desirable answers or intended teaching content. To input information into the minds of children could

still be a strong and influential desire of teachers. This explains why teachers tended to be task oriented and failed to help children make decisions to search for topics, or select needed materials. Teachers were not aware of letting children involved in the planning and execution of project through the series of tasks. Children were not demanded to take 'risks', as usual (Li, 2004a).

Teaching resources in great demand

Teachers still relied very much on the lesson plans while implementing project learning. A very detail lesson plan was found among all the teachers on the day when they were implementing project learning in their classrooms. The length of lesson plans ranged from 15 pages to 25 pages. In general, teachers tended to put down the great details of needed resources involved in the lesson plans.

It seems that teachers were aware of the need of plentiful resources involved in project learning. They tended to prepare for it and abundant resources such as photos, pictures, magazines, colour pencils, drawing papers, pencils, stationery etc could be seen in all classrooms. Teachers tended to make full use of resources available to them. For example,

> A toy shop was set up by children in a project. At first, teachers planned to make use of toys made by children… Teachers then found the toys not 'abundant' enough and made use of the old toys brought back by children to be sent to children's homes on the following day.
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> At a post-observation interview, teachers explained the case:
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> "We would like children to enjoy the setting up of a toy shop. The toy shop should look like a real one. We did not have a lot of toys and we could think of the resources brought back by children on the other days… A lot of resources, teaching aids were needed for project learning. Children really enjoyed it and we took a lot of photos in the toy shop.

Preparation for lessons is still the major concern of kindergarten teachers in Hong Kong. Teachers' agenda might override children's interest in the process of learning. Presumably, the success of the lesson, the effectiveness of teaching and provision for quality learning depend very much on teachers' preparation for lessons instead of teachers' responses to children's learning needs. This also explains why project learning was found to be burdensome by kindergarten teachers who had reservation for implementing project learning in their classrooms.

No one teacher mentioned documentation. It seems that the idea of documentation is not in the mind of teachers. Documentation is created from our observations and displayed for the children, their parents, and visitors. Documentation of children's interests and experiences is the basis, and ongoing process of project-based learning. It is a collection of the learning taking place daily. All documentation such as observation records, photos, video clips, artwork, collected should be dated to create a timeline of the interests as they develop. It is for the children to view. It also helps parents to know and understand their child and his/her daily learning.

The need for teacher training

66.4% of kindergartens using "Project Learning Approach" had a partnership with a commercial institution with experience and half of them reported that the cooperation between them was constructive and satisfactory. Only 6 kindergartens, out of the 51 participating schools, would like to give school-based training related to "Project Learning Approach" to teachers. 41 schools would give subsidies to teachers for attending short courses on "Project Learning".

Project learning tends to stress on the authenticity and relevance of activities to children's daily lives. Research suggested that project learning would help children to learn how to cooperate with other children as they need to take responsibility to work their own duties and let children learn how to work individually at the same time. Children would have to adopt an enquiry approach to discover and construct knowledge under project-based approach as children need to find lots of information to fulfill the requirement. Project learning is both emphasis on the product of the project and the process of learning. Children become an active learner as children need to explore their mind and project learning could train lots of skills that are useful for future such as analysis, synthesis and judgment for investigation of questions. Those skills could let students become more independent. Simply put, the key feature of project learning is investigation which is a piece of research that requires children to seek the answers by cooperating with their group mates. At the same time, teacher needs to play a monitor role to ensure the children are going to a right track.

In the present study, nearly all the participants agreed that teachers need to play a guidance role to assist children but need to emphasize children's independent learning at the same time. Participants also agreed that young children's learning and growth ought to be focused on creating meaning and developing understanding of different aspects of the world around them and that incorporation of technology could enhance the various skills needed for children. Nevertheless, not one teacher worried about whether teachers' questions in

discussions were or were not responsive to student outcomes, as well as did or did not assist students to develop more complete or elaborated ideas. Ideas about developing thinking by reducing dependency on adult-regulation through peer-regulation to self-regulation were not particularly present in the minds of teachers. Teachers' concerns emphasized the delivery of teaching in an orderly and on-schedule mode.

Discussion and Conclusion

The study had examined the views on, and how project learning was being implemented in early years' sector in Hong Kong. Though project learning is a recommended, but not required, part of local preschool programs, the new curriculum guide sheds light on early education as something different from traditional academic schooling – which sometimes serves as a recognition for the assumption that project learning is a global practice.

Teachers were confident of the benefits of project learning for children. However, teacher talk was still predominating in the 'dialogues' between children and teachers. Rich and abundant teaching content would mean rich teaching resources, according to teachers' perspectives. There was the tendency of teacher-initiated project learning rather than child-initiated project learning. Teachers were the designers of the big task and children at most could initiate minor revisions during the implementation of the big task. No one teacher mentioned building relationship with children. Teachers were not very skillful in taking up of role of facilitators, though they were committed to do so.

There were signs that teachers tended to incorporate project learning approach and the success of project learning will link to the successful incorporation of abundant learning materials in daily classroom routines, for some schools. Early childhood educators need in-depth training and ongoing support to be adequately prepared to make decisions about learning goals and content and in order to support the effective use of project learning in learning environments for children.

Data reflected that questioning was commonly and widely used by teachers. When exploring a project, the key is not what the teacher knows or understands about the subject, but how to help the children explore their ideas themselves. From observations, the teachers asked questions so the children explained their ideas to the teacher, but not so the children could explore for themselves. Teachers were not aware that it is not necessary for the children to the right answer or information, but to help them find a solution that works for them. It seems that teachers in Hong Kong have difficulty in taking up new roles when engaging children in learning.

Not much research has been done in project-based learning in kindergartens in Hong Kong. Findings in this study were a bit different from the initial findings of Yuen (2009, 2010) that teachers were presumably able to take up the role of facilitators but similar in a sense that teachers were willing to try out the new approach in their teaching (Ho, 2001; Ma, 2001).

Curiously, early childhood educators have been relatively disinclined to address young children's interests in "playing" in project learning. That is, we tend to overlook a large part of what young children can do in their school life. The goals of this study are to bring together a variety of perspectives on the ways in which children and their teachers use, live with, react to, and learn about project learning. We found that early childhood practitioners in Chinese societies started to promote learning using project learning, but the critical barriers perceived by kindergarten teachers are whether there are appropriate/quality resources for learning provided in the classroom.

The study helps to identify a problem that requires attention. There is an initial mismatch between the teacher's residual ideologies and the principles underlying the curriculum innovation. The teacher education programs may need to work out solution(s), evaluate the proposed solution(s), and review the evaluation to see if the intervention can solve the identified problem and then implement the intervention on a wider scale or search for another solution. Teacher training and support play a crucial role in preparing the teachers to implement a new curriculum initiative and in shaping the teachers' beliefs as well as their classroom practices. However, educators have to be cautious about the fact that giving too much direction and teachers lose the sense of ownership while giving too little and they feel that they do not know what to do.

The findings indicate 'open', 'flexible', 'feasible' approaches of teachers making use of external ideas; or signs that the new' curriculum may not be compatible with the practices, values and characteristics of the system and kindergarten teachers in Hong Kong, kindergarten teachers may not find the need to implement project-based learning in ways illustrated in western literature or feel the threat/risk posed by the innovation. The study implies that there are conditions that are necessary for teachers to implement the curriculum change or innovation successfully. Teachers need to be involved in the research and development of the innovation (get a sense of ownership of an innovation) but not just ideas disseminated to them/the user. Teachers may need to determine the problem/aware of their needs, search for an innovation, feel interest in the innovation, evaluate the trials and implement the innovation. Careful investigation is called for to pursue the relationship between curriculum innovation and teacher change in the early childhood sector in Hong Kong.

Further, successful curriculum innovation is linked to teacher development as teachers are key actors in curriculum innovations. Curriculum innovations usually require a change in teacher practice. However, veteran teachers do not tend to change their current practice easily because it is rooted in their beliefs. The potential problem lies in the fact that teachers are not only being asked to change their roles and take on increased responsibility, but they are also being asked to change previously held attitudes and beliefs. To accomplish changes in teacher practice, teachers should not only implement innovations, but they should also become actively involved in the development of innovations. They require training in the skills required and they require the physical resources, such as time to take on new ideas and space to try them out and adapt them to their situation, to implement the changes.

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