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# 透過課例研究教育幼稚園教師幫助 幼兒達致閱讀理解

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## 摘 要

Lewis, Perry 與 Hurd (2004) 談及課例研究「不單改良個別課堂,也為持續改良教學建立 路徑」。老師的專業發展沿著路徑可以在以下七個範疇有進展:一、增加所教科目的知識;二、 增加教學方面的知識;三、增加觀察學生的能力;四、加強同事間的聯繫;五、加強每日教學 實踐與長期目標的連繫;六、加強教學動機與自我功效感;七、改良教學計劃的質量。本文紀 錄澳門一所幼稚園在五個月內進行的課例研究,期望找到教育教師幫助四歲幼兒發展萌發式閱 讀素養的方法。教師會採用提問、澄清、預測與總結的閱讀策略,幫助幼兒擷取故事書的意義。 課堂錄像會轉錄為逐字稿,並以如何引導教師改善幼兒閱讀理解為焦點,根據上述七個範疇作 質性分析。課後進行教師訪談,以檢視教師的專業成長。簡而言之,研究主要目標是在幼兒語 言智能萌發的階段,培育幼兒的心靈與智慧。

關鍵詞:教師專業成長、閱讀理解、萌發式閱讀素養、課例研究

## The Proposed Study in Macao

#### **Background of Study**

In recent years, kindergartens in Macao have been keen on inculcating reading literacy in order to build up a firm linguistic foundation for their 3-5 year-old children (see Macao SAR Policy Address for the Fiscal Year 2005, 2005). Kindergartens principals can invite specialists to help train teachers on emergent reading instruction. This study is set against this background in a public kindergarten that caters for low-income families in Macao. It is hoped that as a result of the study, children are able to comprehend story books, as well as finding reading interesting and learning fun.

#### **Research Goals and Questions**

There are two research goals in the study. First, this study seeks to examine the possibility of educating a team of kindergarten teachers to develop an emergent reading environment in classroom settings. Second, under the supervision of university researchers and support of the principal, teachers know how to conduct reading instruction to children so as to improve their emergent story reading literacy. Overall, teachers are professionally developed and empowered as a result of the series of reading instruction experiments.

With regard to the above-mentioned two research goals, there are altogether six inter-related research questions to be addressed in this study.

- 1. What are the facilitative conditions and enablers for children reading instruction?
- 2. Is there any viable teacher professional development model that can bring about enhanced teacher motivation and self-efficacy?
- 3. How do these conditions and enablers result in enhanced teacher motivation and self-efficacy for early children reading?
- 4. As a result of enhanced teacher motivation and self-efficacy, what are the potential teacher professional development results when the facilitative conditions and enablers for children reading instruction are satisfied?
- 5. In what ways do these professional development results contribute to improved emergent story reading literacy in general, and story comprehension in particular?
- 6. In what ways do these results contribute to further innovations in reading instruction in

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the future?

#### **Research Sample – Students, Teachers and the School**

The research sample consisted of thirty 4-year-old children, 13 boys and 17 girls, studying at the K2 level in a public school in Macao. K2 was chosen because the focus of study was on emergent story reading comprehension and the children at this level were mentally ready for the series of teaching experiments. The public school under study had a tradition of conducting school-based action research, so the whole kindergarten could be mobilized for the proposed lesson studies. There are altogether four K1-K3 qualified, experienced kindergarten teachers serving at the three kindergarten grade levels in this school. All four teachers were involved in the study as a professional development team despite K2 is the target grade for this study of emergent reading literacy. There is one principal who is responsible for overall administration and management of the whole school, which consists of both kindergarten and primary sections. Besides, there is a deputy principal who is appointed as an academic head of the kindergarten section to manage the team of the four kindergarten teachers. Two researchers from the University of Macau will provide expert support for the conduct of the study. Because of the lesson study approach adopted in the present study, the researchers need to work closely with the principals and teachers to solve all sorts of problems that might arise for the betterment of the teachers' professional development.

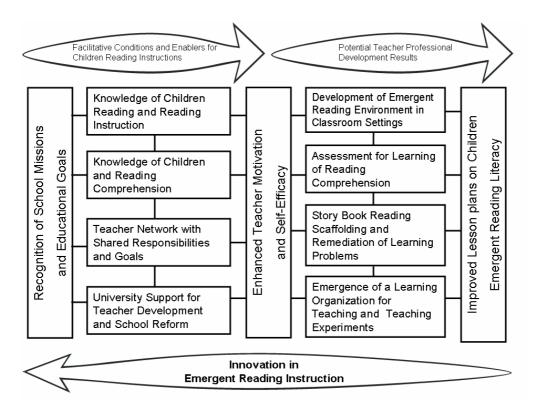
## **Theoretical Foundation and Logistics Framework**

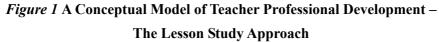
# A Conceptual Model of Teacher Professional Development – The Lesson Study Approach

There are many research-based conceptual models of teacher professional development (e.g. Schon, 1987), one of which is the lesson study approach originated from Japan half a century ago (see Lewis & Tsuchida, 1998 for a discussion). Using the lesson study approach, seven pathways of teacher professional development are identified, namely, (1) increased knowledge of subject matter, (2) increased knowledge of instruction, (3) increased ability to observe students, (4) stronger collegial networks, (5) stronger connection of daily practice to long-term goals, (6) stronger motivation and sense of efficacy, and (7) improved quality of

lesson plan (Lewis, Perry & Hurd, 2004).

In order to achieve the two research goals of the study, these pathways need to be integrated into a conceptual model as a guide to answering the six research questions of the study. In this regard, the Excellence Model employed by the European Foundation for Quality Management is adopted in this study (EFQM, 2006). This model depicts how leadership orchestrates three types of enablers which involve (1) people, (2) policy and strategy, as well as (3) partnerships and resources in organizational processes to produce people, customer and society results. These three key performance results will be feedback to the leadership level for innovation and leaning. Figure 1 presents a Conceptual Model of Teacher Professional Development (The Lesson Study Approach) so as to frame the conduct of inquiry.





In Figure 1, there are four sets of facilitative conditions and/or enablers for children's

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reading instruction: (1) Knowledge of children reading and reading instruction; (2) Knowledge of children and reading comprehension; (3) Teacher network with shared responsibilities and goals; (4) University support for teacher development and school reform. Likewise, there are four sets of potential teacher professional development results: (1) Development of emergent reading environment in classroom settings; (2) Assessment for learning of reading comprehension; (3) Story book reading scaffolding and remediation of learning problems; (4) Emergence of a learning organization for teaching and teaching experiments.

Through recognition of school missions and educational goals by teachers and the principal, there is enhanced teacher motivation and self-efficacy when these facilitative conditions and enablers are found to bring about the desired teacher professional development results, alongside improved lesson plans on children emergent reading literacy. These results will be feedback to the classrooms bringing about innovations in emergent reading instruction, and at the same time providing evidences for the renewal of school missions and educational goals (for a comprehensive discussion of the concepts of self-efficacy, see Bandura, 1997; Chan, 2005; Tschannen-Moran, Woolfolk & Hoy, 1998).

#### A Three-Stage Lesson Study Implementation Framework

Figure 2 depicts a three-stage lesson study implementation framework (for a discussion of the lesson studies conducted in Japan, see Lewis, 1995; Lewis, Perry & Hurd, 2004; Lewis & Tsuchida, 1998; Stigler & Hiebert, 1999). This framework is based on the conceptual of teacher professional development discussed earlier.

One key idea underlying this implementation framework is that teachers are reflective practitioners, and the effectiveness of revised teaching practices may not be assessed without concomitant changes in their conception and belief systems (see Gu & Yang, 2004 for a discussion of this revised version of lesson study approach). Set against the background of this study, between the first and second stages of the teaching experiments, teachers need to reflect on the deployment of reading strategies as recommended by the researchers and the ones they normally use in their daily practices. They need to make a change of belief that it is worthwhile, plausible and fruitful to adopt the recommended reading strategies. Between the second and third stages of the teaching experiments, teachers need to reflect on the

realities and effectiveness of scaffolding of children's reading for comprehension when they deploy the recommended teaching and assessment methods. During the team-teaching processes, teachers not only learn with each other but also learn from each other. The four kindergarten teachers (T1-T4) will take turns carrying out the teaching experiments, but all four teachers are always present in the classroom where these teaching experiments are undertaken.

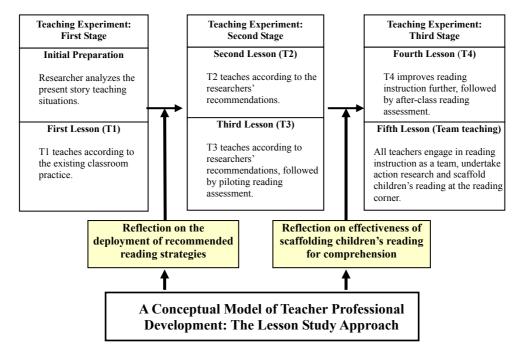


Figure 2 A Three-Stage Lesson Study Implementation Framework

## **Conduct of Inquiry**

Under the guidance of the researchers, this study involved the participation and cooperation of one principal, one deputy principal, four teachers and 30 children for a 5-month intensive study. Eight models/frameworks were proposed to frame the conduct of inquiry, the first two of which were already described in section 2, i.e. the Conceptual Model of Teacher Professional Development (The Lesson Study Approach), and the Three-Stage Lesson Study Implementation Framework. These two models constituted respectively the

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theoretical and logistics foundation of the present study.

The lesson study approach necessitates teachers to develop a whole-class instructional environment, followed by assessment of emergent reading comprehension, and scaffolding children at the reading corners. To this end, six models/frameworks were further developed to exemplify the roles and responsibilities of all those involved in the study. First, the Model of Teacher-supported Emergent Reading Environment and Integrated Assessment System for Emergent Reading Instruction (An Implementation Framework), was designed to show concisely the work needed to be completed by teachers in order to instruct and scaffold children for better reading comprehension. Second, in order to secure reliable and valid assessments for informed decisions of the focuses of scaffolding, the two models, namely the Conceptual Model of Emergent Story Reading Comprehension and the 4P Teacher Action Research Model, recapitulated the theories underpinning the proposed assessment logistics and action research procedures. Third, as the main theme of this study was on teacher professional development, the Teacher Collaboration Model and the Learning Organization Interaction Model were developed to delineate the building blocks and the interactive communication networks in the formation of a learning organization.

#### The Model of Teacher-supported Emergent Reading Environment

As seen in Figure 2, after the initial preparation, there are altogether five lessons conducted in three stages using the lesson study approach of teacher professional development.

It is intended that through these five consecutive lessons of teaching experiments, a teacher-supported emergent reading environment can be established. There are three steps with different points of emphasis to be completed gradually, namely (1) before reading instruction, to establish a reading corner that serves as an advance organizer (see Ausubel, 1960 for this idea); (2) during whole class instruction, to use a big book to read-aloud and think-aloud so as to achieve children's reading comprehension and this is supplemented by whole-class reciprocal teaching for reading strategy instruction (see Palincsar & Brown, 1984 for a discussion); and (3) after-class action research, to use Intergraded Assessment System (IAS) to diagnose and scaffold children's reading literacy (Birenbaum et. al., 2006). By then, it is hoped that teachers not only know the reasons but also able to: (1) change the

book corner to that of a reading corner; (2) change story telling to that of teacher-supported story reading; and (3) feel competent to scaffold children to higher levels of reading comprehension (see Figure 3 for the flow of the three steps). Sit (2006) details the three steps of this model of teacher-supported emergent reading environment in classroom settings (薛 寶嫦, 2006).

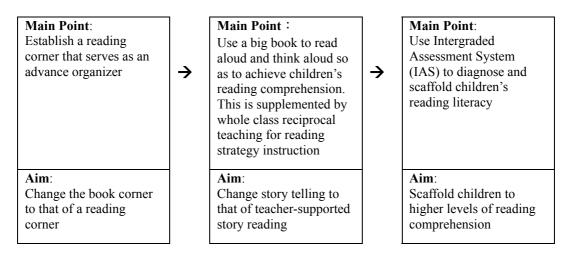


Figure 3 The Model of Teacher-supported Emergent Reading Environment

# The Integrated Assessment System for Emergent Reading Instruction – An Implementation Framework

As seen in Figure 2, starting from lesson three after teachers are conversant with the development of teacher-supported emergent reading environment to practise recommended reading instruction, the IAS is formally piloted and introduced in classroom settings. There are four steps with different points of emphasis to be completed gradually, namely (1) Classroom observation – the teacher observes and records the performance of five children of different learning abilities during the instruction; (2) After-class storybook assessment – the teacher uses storybook to assess target children orally and individually, as well as instructing children's reading during the assessment process; (3) After-class storyboard assessment – the teacher interacts with children using storyboard as well as guiding them to retell and illustrate the essential parts of the story; and (4) Action research at the reading corner – the teacher plans action research within children's zone of proximal development to

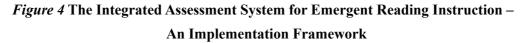
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scaffold their learning to read (see Figure 4 for the flow of the four steps). By then, it is hoped that teachers not only know the reasons but are also able to: (1) Recognize children's learning characteristics; (2) Evaluate the degree of attainment of the objectives of whole-class reading instruction as well as ascertaining opportunities for children to have a comprehensive understanding of the content of the story; (3) Children are able to demonstrate their comprehension of the segments of the story; and (4) The teacher tailors instruction according to student's abilities and characteristics and optimizes children's reading effectiveness (see Krechevsky, 1998 for the ideas of storyboard assessment used in Project Zero).

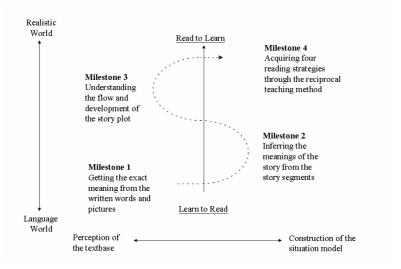
Step 1: Classroom observation		Step 2 : After-class storybook assessment		Step 3 : After-class storyboard assessment		Step 4 : Action research at reading corner
Main Point: The teacher observes and records the performance of five children of different learning abilities during the instruction.	→	Main Point : According to assessment guideline, the teacher uses storybook to assess target children orally and individually as well as instructing children's reading during the assessment process.	→	Main Point: The teacher interacts with children using storyboard, guides them to retell and illustrate the essential parts of the story as well as make up new stories.	<b>→</b>	Main Point : Teacher plans action research within children's Zone of Proximal Development to scaffold their learning to read.
Aim: Recognize children's learning characteristics.		Aim: Evaluate the degree of attainment of the objectives of whole class reading instruction and ascertain opportunities for children to have a comprehensive understanding of the content of the story.		Aim: Children are able to demonstrate their comprehension of the segments of the story.		<b>Aim:</b> The teacher tailors instruction according to student's abilities and characteristics, optimizes children's reading effectiveness.



#### The Conceptual Model of Emergent Story Reading Comprehension

Central to the storybook and storyboard assessment in the IAS is a conceptual model pertaining to the assessment of emergent reading comprehension (see Figure 5). Research shows that children need to start "learn to read" first and then proceed to "read to learn" during the first eight years of their childhood (see U.S. Department of Education, 1996 for an explication of this developmental process). As the target children in this study are mainly 4-year-old, the focus of the present study is to help children learn to read so as to prepare them to read to learn in the stage of primary schooling.

With regard to storybook reading comprehension, four milestones are discernible as a result of emergent reading instruction using the reciprocal teaching method: (1) Getting the exact meaning from the written words and pictures; (2) Inferring the meanings from the story segments; (3) Understanding the flow of the story and story plot; and (4) Acquiring four reading strategies through the reciprocal teaching method. Feldman's (1980) non-universal theory of cognitive development is employed to guide this model of reading comprehension. Two seminal ideas are worthy of attention for an appropriate interpretation of milestones: (1) Children can proceed to the next milestone without waiting for an earlier milestone to be fully attained; and (2) Different children can attain different sets of milestones throughout the whole process of reading literacy development.



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#### Figure 5 The Conceptual Model of Emergent Story Reading Comprehension

Assessment guidelines for storybook and storyboard assessment have been devised by researchers for teachers' use after the whole-class instruction. In order to secure reliability and validity of the storybook and storyboard assessment, a conceptual model for an understanding of reading literacy is proposed, and this is valuable for the design of milestone indicators of reading comprehension (adapted from 謝錫金、林偉業、林裕康、羅嘉怡, 2005). In a nutshell, the milestones are conceptualized and delineated along two independent dimensions, namely, (1) the horizontal dimension focusing on both the children's perception of the story's textbase and the construction of the story's situation models; and (2) the vertical dimension focusing on both the children's familiarity with the language to be acquired and the experiences accumulated in their realistic everyday lives for text meaning construction.

#### The 4P Teacher Action Research Model and the Teacher Collaboration Model

In Figure 4, after the whole-class reading instruction, all four teachers are required to devise action research plans within children's zone of proximal development so as to scaffold target children to take on their responsibility to learn to read storybooks (see Vygotsky, 1978 for the underlying concepts). Teachers need to tailor instruction according to student's abilities and characteristics, and optimize children's reading effectiveness. In order to help teachers make sense of what they need to do, the 4P Teacher Action Research Model is proposed and this is summarized in Figure 6 (adapted from 李子健、鍾宇平, 2002).

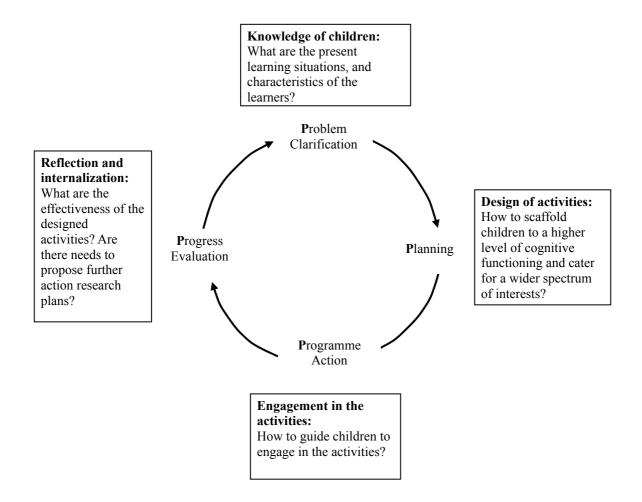


Figure 6 The 4P Teacher Action Research Model

The "4P" refers to the cyclic research processes involving four steps: (1) Problem clarification; (2) Planning; (3) Programme action; (4) Progress evaluation. First, the teacher must clarify present learning situations and characteristics of the learners, and identify milestones that need immediate remediation and further strengthening. Second, the teacher needs to design activities so as to scaffold children to a higher level of cognitive functioning and at the same time cater for a wider spectrum of interests. Third, the teacher needs to engage children in the designed activities at the reading corners in accordance with the action research plans. Fourth, the teacher reflects and internalizes the effectiveness of the designed activities so as to foster linkage between theory and practice as well as making

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attempts to find out children's needs for further action research plans.

It should be noted that the four teachers are not alone in this scaffolding exercise. With the support of the principal, deputy principal and the researchers, teachers join hands in undertaking the action research, and this is a hallmark of the lesson study approach of teacher professional development (see Figure 7 for a diagrammatic representation of this learning community of teachers T1-T3, school leaders L and the researchers R).

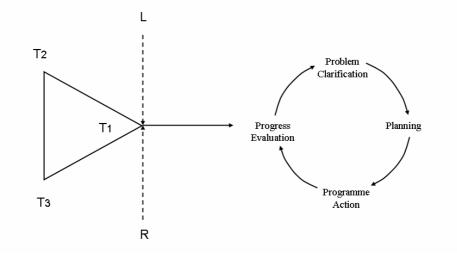


Figure 7 The Teacher Collaboration Model

## The Establishment of a Learning Organization

#### **Expected Outcomes of Collaborative Action Research and Team Teaching**

It is the intention of this study to demonstrate that teachers, through the formation of a learning organization, are professionally developed and empowered as a result of the series of reading instruction teaching experiments and the follow-up scaffolding action research activities (see Senge, 1990; 魏惠娟, 2002 for the underlying concepts of a learning organization). Figure 8 summarizes the interactions among the teachers, school leaders and the researchers. First, the team of teachers (T1, T2, ...Tn) can learn with and from each other as a learning community. Second, teachers can seek advice from the school leaders (L1 and

L2) and report what they have achieved. The school leaders will render support to teachers and there is mutual encouragement between the teachers and the school leaders. Third, the researchers recommend the school leaders appropriate educational theories to substantiate the conduct of inquiry and in return the school leaders take the lead to coordinate the teaching and research activities. Fourth, the researchers listen carefully to the teachers' reflection on what they have done and provide them with expert consultation.

Based on this analysis framework, the expected outcomes of collaborative action research and team teaching are: (1) School organization culture – exemplified in the collegial network among the four kindergarten teachers as well as between the teachers as a team and the school leadership; (2) Teacher empowerment – teachers grow and glow in subject matter knowledge, instructional knowledge and children observation methodologies; (3) School organization effectiveness – there are linkages of classroom practices with long-term goals, accompanied by visibly improved lesson plans.

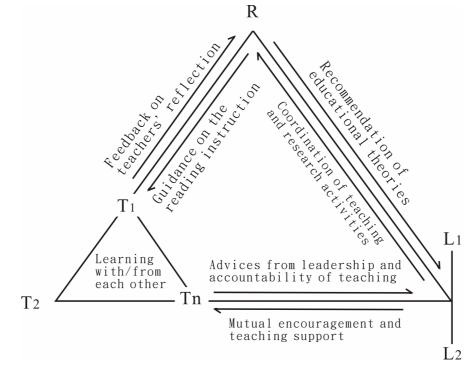


Figure 8 The Learning Organization Interaction Model

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#### **Summary of Research Results**

All lessons, assessment processes and action research were video-taped and subsequently transcribed for qualitative analyses on the seven pathways leading to the improvement of reading comprehension. Post-lesson interviews were also conducted to examine how teachers develop professionally. However, space restrictions in this paper prevents detailed reporting of the analysis of lesson studies data and results of post-lesson interviews; these research findings and results will be published separately in due course.

Answers to the six research question are concisely reported below:

Regarding the first research question of facilitative conditions and enablers for children reading instruction, there are some evidences of a stronger connection between daily practices and long-term goals. Teachers feel the need to introduce story reading into the early childhood curriculum. As the school under study is a public school, a large-scale renovation of the early childhood syllabus is beyond the capacity and control of the teachers. After the five lessons of teaching experiments, all four teachers know how to select suitable storybooks for early reading instruction and are able to analyze the textbase of these storybooks. They feel competent to practise the recommended four reading strategies used in reciprocal teaching. During lesson one, the researchers find that the teachers do not have clear concepts of the linguistic abilities of the students and their assessment is not objective, nor is it scientific at all. However, storybook and storyboard assessment done after lesson four revealed that the teachers can rate children's reading comprehension using the rating scales designed by the researchers. The teachers remark that they have better ideas on what reading comprehension entails and on how to discriminate among children so as to bring them up from one milestone to another one further up the reading comprehension trajectory. Under the support of the researchers and the formation of communication channels in the kindergarten section of the school, the teachers understand the school missions and goals better. They gradually engage in dialogues of common themes and share responsibility of the tasks assigned by the school authority. As the teaching experiments are done successfully as planned, the teacher's motivation and self-efficacy gradually build up, and the momentum is picking up when what has been accomplished is acknowledged by the school authority.

Regarding the second question of the existence of a viable teacher professional development model that can bring about enhanced teacher motivation and self-efficacy, the

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3-stage lesson study implementation framework and the associated conceptual models explicated in this paper is a case in point.

Regarding the third question of how conditions and enablers result in enhanced teacher motivation and self-efficacy for early children reading, it is necessary to point out that teacher motivation and self-efficacy are essential for sustaining the synergies of a learning organization. In the present study, three sources of experiences affecting teacher motivation and efficacy can be identified: (1) Mastery experiences – successful teaching experiences – opportunities for the teachers to observe other teachers of similar abilities to succeed in teaching tasks; (3) Verbal persuasion – teachers are able to use the new skills learnt from the workshops run by the researchers and achieve well in the teaching experiments and there are positive comments and feedback from the researchers and the school leaders. There is an additional fourth source pertaining to the physiological and emotional cues difficult to be established in the study. However, the teachers do remark that although resource support is sufficient, they still lack time to achieve the expectation level they hope to reach.

Regarding the fourth question of the teacher professional development results as a result of enhanced teacher motivation and self-efficacy after the facilitative conditions and enablers for children reading instruction are satisfied, the following six points may be summarized: (1) All teachers are able to make a transformation from story telling to story reading; (2) All teachers know the logistics to transform the traditional book corners into reading corners that are accessible to all children and deployed with satisfactory educational results; (3) An increase in the teachers' knowledge of the students is noted and this is especially so for those target students who are observed and scaffold by designated teachers; (4) An increase in the teachers' assessment skills is noted and this is especially so when the teachers practice the IAS, necessitating a differentiation between "assessment of learning" and "assessment for learning"; (5)A stronger collegial network develops when there is more coordination among the teachers across the K1-K3 grades and when there is increased shared commitments and responsibilities to solve problems together during the five months of the teaching experiments; and (6) The teachers are able to produce improved lesson plans viewed as collective wisdom and common assets of the whole school.

Regarding the fifth question of how professional development results contribute to

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improved emergent story reading literacy in general, and story comprehension in particular, it should be pointed out that reflection on the effectiveness of scaffolding of children emergent reading literacy for comprehension is of utmost concern. Teaching experiments enable teachers to understand the gap between the implementation of the effective reading strategies within teacher-supported language learning environments and that practised in the realistic classroom contexts. Teachers can learn with/from each other within a learning organization. The outcomes are increased children emergent story reading literacy in general, and story comprehension in particular. Innovation feedback on school missions and goals points to revised direction of emergent reading instruction.

Regarding the sixth question of how professional development results contribute to further innovations in reading instruction in the future, it should be pointed out that both the principal's and the teachers' reflection on the worthwhile, plausible and fruitful deployment of the recommended effective reading strategies is of utmost concern. Teaching experiments enable teachers to understand the gap between the existing reading instructional practices and those effective reading strategies recommended by the researchers. Achievements in teaching experiments have convinced the principal and the academic head of the kindergarten section to restructure curricular provisions to children for emergent reading literacy. Therefore, acknowledgement of this gap by the teachers and the achievements of the teachers result in changes of conceptions and models of reading instruction. Innovation feedback on the school missions and goals points to revised direction of emergent reading instruction.

## Conclusion

After five months of research, this study demonstrates that it is possible to educate a team of kindergarten teachers to develop an emergent reading environment in classroom settings. Under the supervision of university researchers and the support of the principal, teachers know how to conduct reading instruction to children so as to improve their emergent story reading literacy. Overall, teachers are professionally developed and empowered, particularly on nourishing children's hearts and minds during their prime time of linguistic intelligence development.

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## Lesson study as a means to help kindergarten teachers develop children's reading comprehension ability

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## Abstract

Lewis, Perry and Hurd (2004) remarked that lesson study as a teacher professional development tool is not just about improving a single lesson, but about building pathways for ongoing improvement of instruction. The seven key pathways they identified were: (1) increased knowledge of subject matter, (2) increased knowledge of instruction, (3) increased ability to observe students, (4) stronger collegial networks, (5) stronger connection of daily practice to long-term goals, (6) stronger motivation and sense of efficacy, and (7) improved quality of lesson plans. This paper documents a series of lesson studies conducted within a 5-month period which seek to educate and introduce to teachers a possible approach to help a class of 4-year-old children in a public kindergarten in Macao develop early reading literacy. The teachers who were involved in the teaching experiments adopted summarizing, questioning, clarifying, and predicting reading strategies to help early readers to derive meanings from storybooks. All lessons were video-taped and subsequently transcribed for qualitative analyses on the seven pathways leading to the improvement of reading comprehension. Post-lesson interviews were also conducted to examine how teachers develop professionally. In a nutshell, the main goal of the study was to educate both children's hearts and minds during the emergent stage of linguistic intelligence development.

Key words: Teacher professional development, reading comprehension, emergent reading literacy, lesson study.

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