

The perceptions of the use of inquiry
based methods in the Chinese language
classroom in IBO Primary Years
Programme schools in the Asia Pacific
region

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Executive Summary

Research Project overview

On receiving the Jeff Thompson Award, this small-scale research project sought to investigate how inquiry approaches were being transferred into the Primary Years Programme (PYP) classrooms where Chinese was being taught as an additional language.

In 2009, within the Asia Pacific region, 70% of schools using the PYP, taught Chinese as an additional language. In offering the PYP, the common pedagogical approach is broadly called 'inquiry', underpinned by the works of John Dewey (1938), Kathy Short (1996) and Kath Murdoch, (2007) to name a few. In terms of language, the IBO suggests that IB World Schools offering the PYP should be considering ways in which the school's language policy incorporates the following:

- Promote inquiry-based authentic language learning
- Focus on trans disciplinary nature of language learning
- Incorporate the teaching and learning of language into the programme of inquiry (IBO, 2008, 3)

The 'inquiry' classroom is far less about rote learning and memorizing facts, and more about authentic experiences, questioning, investigation, creating solutions, applying to practical situations, with an emphasis on the process rather than the product. This research sought to discover how this approach to learning is transferred into the Chinese language classroom.

The PYP is defined on the IBO website as follows; '*The IB Primary Years Programme, for students aged 3 to 12, focuses on the development of the whole child as an inquirer, both in the classroom and in the world outside.*' (IBO, 2012)

The following questions guided the overall research.

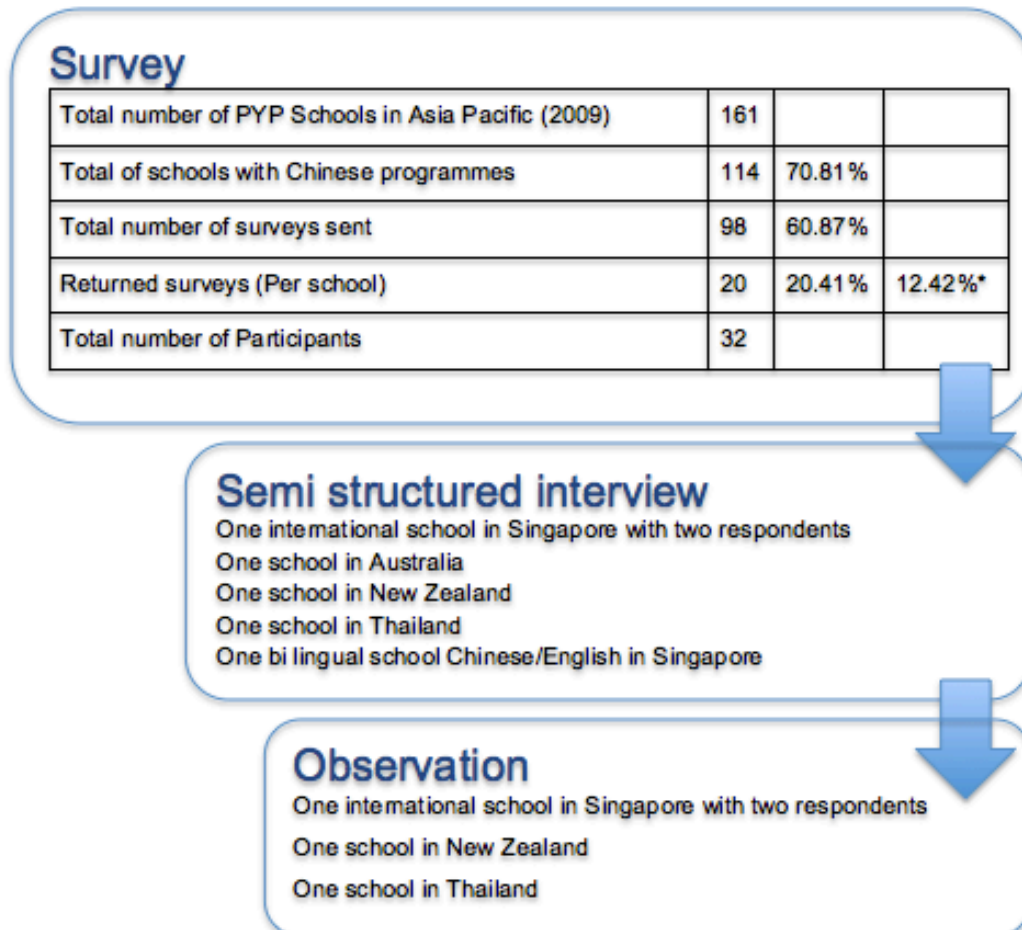
1. What are the current perceptions and understanding of inquiry based learning and the learning of Chinese (Mandarin) as an additional language?
2. What are the challenges and successes in implementing inquiry based learning in Chinese (Mandarin) as an additional language?
3. What resources and technology are being used to support the acquisition of Chinese in the inquiry classroom?

Very little research existed on practices in the Chinese language classroom in international schools at the time, so these questions led to using a mixed method approach (Richards, 2009, Silverman and Marvasti, 2008) that is outlined further below. This approach allowed initial contact to be made with a larger number of schools in order to establish how the Chinese language programme was being taught. The main purpose was to search for a sample of schools that perceived themselves as using inquiry methods within the programme itself and to discount those who were teaching an isolated programme, additional syllabus or method.

Research design

The data was collected using an initial survey, following on with 6 semi structured interviews and then further with 4 classroom observations. The tables below indicate the numbers of participants in each method at each stage.

Figure 1. Data collection process



* The total participation rate in this research of PYP Schools in the Asia Pacific Region

The focus of the survey researched the following areas:

- The level of knowledge and expertise the teachers had of PYP and practices in PYP schools
- The classroom environment and resources
- Teachers' consideration of their own practices on inquiry based classrooms

In particular, when analyzing the responses a major consideration was given to Question 11, as this more closely illustrated the extent to which a teacher taught in a more traditional way or incorporated strategies that were conducive to inquiry classrooms. The example given below demonstrates the areas that would be specifically highlighted for the purpose of selecting a further smaller sample to be interviewed in more depth.

Figure 2. Question 11

11. Please choose the aspects that are relevant to you in your classroom teaching

	Never	Sometimes	Often	Always
The children see the connections with other areas of the curriculum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children work through text books.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children choose what vocabulary and phrases they need to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children relate the language lessons to real life experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children actively take part in role play using targeted structures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children talk to the teacher to practice the language structures they are learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children are silent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children use the Chinese outside of the language classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children have opportunities to self assess.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children take at least one test per week.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children know the learning objectives of each lesson.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children work in groups collaboratively to practice language structures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children work on projects or themes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children watch videos and clips to help learn Chinese.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The children use the internet to help their learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Table 1: Responses to question 11 which determined the criterion for selection

Collaboration	Often/always
Role play	Often/always
Projects/themes	Often/always
Text books	Never/Sometimes
Choice of vocabulary	Often/always
Use of Internet	Often/sometimes
Self assessment	Often/sometimes
Learning objectives	Always/often
See connections	Always/often
Real life experiences	Always/often
Testing once per week	Never/sometimes

Using the above criteria, analysis was made and those responses that fitted these criteria were subdivided into areas of the Asia Pacific region. Proportionally the amount of respondents in Singapore was higher so out of the eleven respondents, three were selected.

Out of the three respondents in Oceania (New Zealand, Australia and Fiji) the respondents that specifically taught the 7-9 year old range two were selected. From the response from Indonesia and Thailand five respondents fitted the criteria so a simple random sample was made and one was selected. The respondents in Hong Kong did not teach juniors and specifically middle juniors.

The succeeding six semi structured interviews took place using Skype for 30-40 minutes each, addressing the three guiding questions. The interviews were taped and transcribed and allowed for more detailed data to be obtained as to the perceptions of teachers of inquiry based learning in the Chinese classroom. The respondents were all native Chinese speakers, except for one bilingual English/Chinese teacher.

From the interviews, four teachers permitted further data to be collected in the classrooms through observations. The observations took place in three different schools with four different teachers and individual data recorded on a chart. Conducting observations of classroom practice attempted to observe whether there was alignment between the interviews and the observations.

The design of the observations was loosely based on the work of Liu Yongbing and Zhao Shouhui (2008). They also conducted research to look at policy into practice in the Chinese language classroom (in Singapore schools). They used the following premise to observe one particular unit of study.

Units of pedagogic practice are subdivided into lessons; lessons are in turn further divided into kinds of classroom organisation (phases) in which teachers and students engage in particular activities. For this first category, 10 possible phases are identified: Whole Class Lecture (Monologue), Whole Class Answer Checking (IRF), Whole Class Elicitation and Discussion, Choral Repetition and/or Oral Reading, Whole Class Demonstration or Activity, Student Demonstration/Presentation, Group Work, Individual Silent Seatwork, Test Taking, and Language Lab. Each of these phases is coded in minutes on a separate Excel worksheet. (P.175)

The categories were altered to fit the context of the primary classroom in an international school and three pilots were taken to refine the categories and ensure that the researcher and assistant were clear on the categories and timings.

The main categories were identified and then a tally made to establish the proportion of time spent in a particular situation.

Tallying criteria for the Pilot study

- Instructions/ clarifications
- Closed questions - Teacher
- Closed responds - Teacher

- Closed questions - Students
- Closed responds - Students
- Open-ended questions - Teacher
- Open-ended responds - Teacher
- Open-ended questions - Students
- Open-ended responds - Students
- Learning objectives of the lesson (Listen)
- Imitating teachers/ choral work

The criteria were refined to allow more effective collection of the data. It was recognized that without using a video recording, there was an inability to hear all the detailed responses. Given the challenges of finding willing teachers to participate, it would have been too intrusive to also use a video camera. The researcher and assistant sat at strategic points in the classroom to observe individually and then crosschecked their findings after the lesson. The results of the tally were collated on a chart.

Final criteria for tallying

- Giving instructions
- Giving clarification
- Referring to the learning objectives of the lesson
- Students the imitating teacher/ choral Work
- Closed questions from the students and the teacher
- Open-ended questions from the teacher
- Open-ended questions from the students (whole class setting)
- Open-ended responses from the students (whole class settling)
- Reflection by the students

In addition to recording the amount of time an activity took, notes were taken on specific areas that the participants had responded to or noted, particularly in the initial survey.

- Authentic learning (real life connections/experiences)
- Choice of what the children learn (vocabulary, topics/themes)
- Prior learning/knowledge
- Use of resources-textbooks/IT
- Collaboration-group-pair work

These areas were chosen to support the notion that children in classrooms with an inquiry approach would be more likely to be given these opportunities. This would align with the interpretation of 'inquiry', as noted here.

Inquiry, interpreted in the broadest sense, is the process initiated by the learner or the teacher which moves the learner from his or her current level of understanding to a new and deeper level of understanding. This can mean:

- Exploring, wondering and questioning
- Experimenting and playing with possibilities
- Researching and seeking information

- Collecting data and reporting findings
- Clarifying existing ideas and reappraising events
- Deepening understanding through the application of a concept or rule
- Making and testing theories
- Making predictions and acting purposefully to see what happens
- Elaborating on solutions to problems. (IBO, 2009, 29)

Research findings

From the survey, the training and background of the teachers (many being of Chinese heritage themselves where their teacher training has taken place in China or Chinese speaking countries) and would more likely be based around a more traditional approach. 37% of teachers were trained in English speaking countries and 78.1% in China or Chinese speaking countries. However, only 3.1% of the teachers actually taught children with a Chinese speaking background and 41.9% taught those children from English speaking backgrounds. Despite, it would seem, having no real experience of pedagogy outside China, Chinese language teachers are required to adapt to International schools using an inquiry based approach. Considering, as was verified in the interviews by the respondents, Professional Development is kept to a minimum in general, when analysis was made of the type of PYP workshops the Chinese language teachers had attended, only 6 out of the 24 respondents said they had attended 'Making the PYP Happen'. This would seem to be an essential basis for a teacher in a PYP school to become familiar with a very different framework and approach.

There was evidence from the teachers' responses, through both the survey and interviews, that there exists a broad range of perceptions of what an inquiry approach is and what that means in the context of the PYP. This further indicated a lack of clarity and some confusion with some teachers, concerning the meaning of inquiry in the context of a language classroom. There was an indication that some of teachers interviewed wanted to create more authentic situations for the children to learn Chinese and made attempts to do so, but this was not consistent. Links were made to the content of the Unit of Inquiry that was being used and developed by classroom teachers, but it largely depended on how appropriate the Chinese language teacher felt the vocabulary was. The development of a unit was done by classroom teachers and mostly not with the involvement of the Chinese language teachers. This then indicated that an isolated set of Chinese language lessons was provided for the students.

Therefore the PYP seemed to be something that the homeroom teachers 'taught' and the Chinese language teachers did not necessarily play a role in teaching the programme. Their perceptions seem to conclude that PYP means teaching units from the school's Programme of Inquiry and that these units do not provide the content language needed to meet expectations in developing skills in Chinese. In particular, when any concerns were evident, vocabulary was the issue.

Overall, consistent in the survey, interviews and observation, the findings show an interest in, and willingness to, engage children through different methods from which to learn Chinese. There is, however, a tension between children knowing and understanding vocabulary and grammar and challenging them conceptually through different methods. For

instance, the writing of characters, which demands a different process to that of writing in Roman script, can be challenging to some children. It was unclear as to whether the lens through which the teachers would like to encourage a certain amount of inquiry, with open-ended discussion and active participation was because they see it valuable and effective, or that it is because they are in a PYP school.

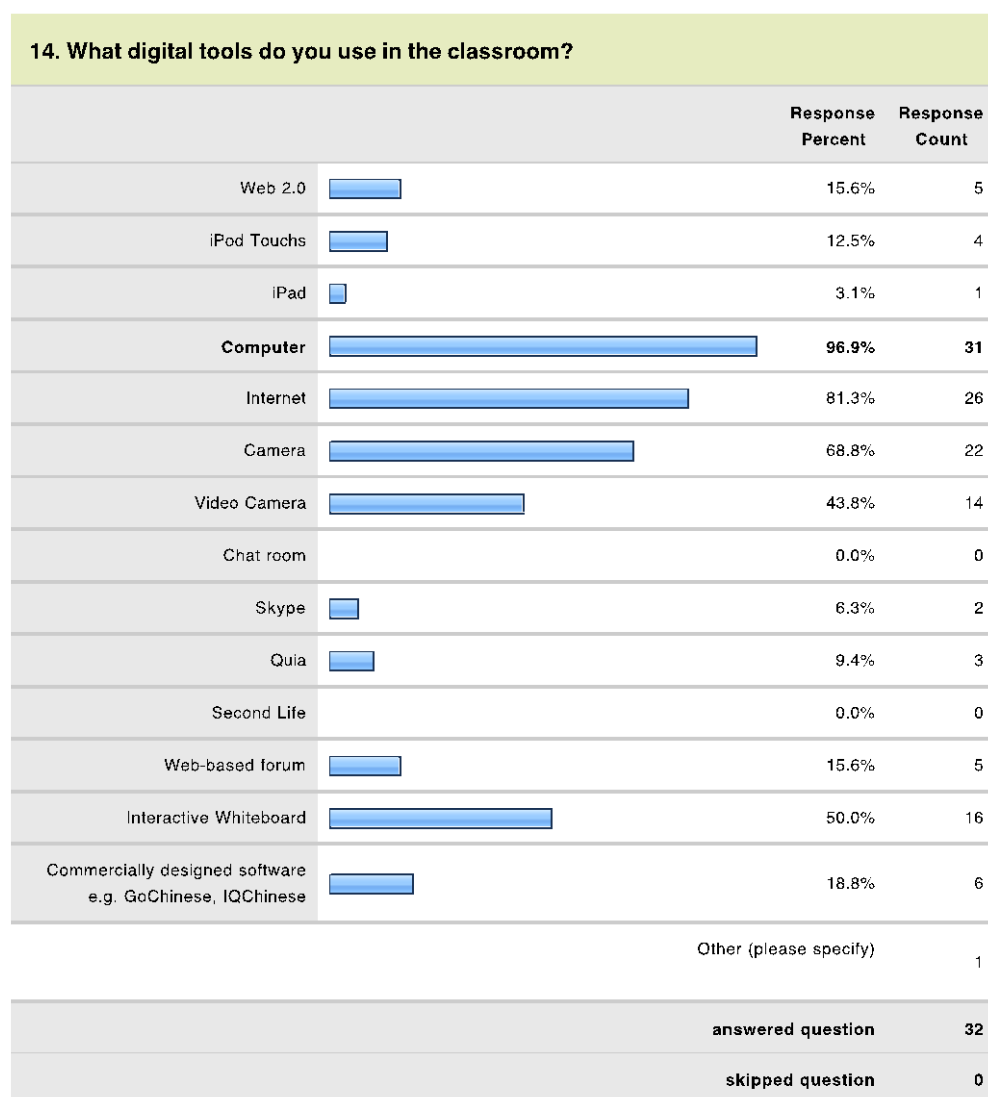
In the classrooms observed, the data collected suggested that the type of questions being asked were less inquiry based or less likely to lead to the interpretations of inquiry as proposed by the IBO. The majority of questions were based on finding an accurate answer. However, there were individual examples of students being given the opportunity to explore language content through asking questions (requiring accurate answers) in a 'hot seating' situation with one student being the 'expert'. In addition, examples of role-play and pair work was seen in most of the classes. Whilst this allowed for dialogue, measures would have to be taken to ensure that the focus for pair work was not always practicing a grammatical structure for accuracy, but might allow for more experimentation and exploration of the language in an inquiry approach towards constructing deeper understanding.

The findings also suggested that the Chinese language teachers are often expected to teach across different age bands, where they could be teaching 5 year olds but also 12 year olds plus, often in the same day. If collaboration between the homeroom teachers and the Chinese Language teachers was to take place, the Chinese language teachers might have to work with a large number of homeroom teachers. In addition the planning and organization of a range of inquiry based activities, would take a lot of time.

As mentioned previously, the provision of small group or pair work activities were observed in the research, although the maximum time in any lesson given to this type of activity was less than a quarter of the time. Most teachers would note that it is a different skill to organize groups of very young children in interactive, inquiry work, than with more mature 12 year olds. This seemed to indicate that overall, Chinese language teachers are expected to be adaptable and teach a wide range of ages for relatively short periods of time. The Inquiry process can take a longer period and meta-cognition is a large part of the process. In addition, the amount of time that the student is actually learning in a 40-minute lesson, depends greatly on the planning and organization by the Chinese teacher. The one teacher, who had a double period in which to teach, had a significantly higher amount of student talk time than teacher talk time. This longer period may have provided that time for more exploration of language and this might suggest that this time would lend itself to more inquiry approaches.

In terms of technology, the survey revealed a wide use in general, as can be noted from the table below.

Figure 3. Use of digital tools in the classroom



This was also evident through the examples given in the interviews, in particular the use of the Internet to provide suitable materials, camera use for recording work and the use of iPods for recording interviews or oral work. In addition, the Chinese language teachers had received some professional development on the use of technology.

It should be noted that the use of technology might demonstrate a move away from a more didactic approach towards the provision of more open ended, authentic, inquiry experiences. Given the rapid changes in communications and technology, use of technology to create more authentic experiences, such as the use of 'Voice threads' to write a message in Chinese to another class in another part of the world, might be a more engaging and open ended experience in which students could practice with and develop their language skills and understanding. The practice of students actively using cameras (as above, 66.8% indicated that they used cameras in the classroom) and video to record their work, questionings, ideas and so on could have an impact on children learning Chinese in an engaging, open ended way.

Conclusion

As evidenced in the research the number of Chinese language teachers willing to take part both the survey and then interviews was relatively limited, so it should be recognized that this is a small-scale research project. It recognizes the limitations of its scope and strives to highlight the need for further research in this area. There were complexities of language and culture that would undoubtedly influence aspects of Chinese language learning and teaching that are not addressed here. However, the data does offer a starting point from which to continue, and does provide some indication that the Chinese language teachers involved in the interviews and observations, are seeking ways in which to consider inquiry approaches within the confines of their own particular school contexts.

Whilst the participants expressed an awareness of the need to teach with an inquiry based approach in order to be consistent with other teaching practice in the school, there is still uncertainty as to what this might look like. The tendency, it would appear, is for the Chinese language teachers to lean more towards providing situations where the students practice given structures, phrases, or vocabulary. The more open-ended tasks, or inquiry approach, linked to concepts in the Programme of Inquiry, were not evident in this particular research project. There was no indication that the Chinese language teachers had time to collaborate with homeroom teachers, which could assist in developing a more consistent understanding of how inquiry approaches could be developed. Watkins and Biggs (2001) suggest, the more traditional method of memorization and working can also be of benefit to deeper learning. Providing opportunities to explore, professionally learn from each other, and develop pedagogy both in the mainstream classroom and in the language classroom would be an excellent development towards researching and understanding the learning process. Opportunities to visit the language classroom by the mainstream teacher and vice versa, might be a move to developing this relationship towards understanding an inquiry approach.

Clearly the use of technology in the language classroom is being developed in the Chinese language classrooms. There could be useful dialogue and collaboration between teachers towards understanding inquiry as an approach with the use of technology. Given the seemingly lack of professional development opportunities for the Chinese languages teachers involved in the research, schools could constructively provide opportunities for communication between homeroom and language teachers on developing practices in classrooms.

The particular group of teachers, who took part in the research, was open minded and interested in improving and sharing their own practice. The findings are not necessarily representative for all teachers teaching Chinese in the region. However through this research, it was evident that the motivation to deliver an inquiry approach in the Chinese classroom was seen as a positive direction by the teachers interviewed. The careful balance of creating interesting and challenging experiences was an aim of all of the teachers.

The researchers would like to thank all the teachers warmly for allowing this window into the challenges and successes of teaching Chinese as an additional language within the framework of the Primary Years Programme. In addition immense gratitude goes to the Jeff Thompson Award for providing resources and assistance to allow for this opportunity.

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