

# **Enhancing pedagogy and students' historical understanding in history in Singapore schools**

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In Singapore, the use of sources and interpretation is something that has recently been introduced into the Singapore history and social studies curriculum. This is a significant innovation in line with international changes in the teaching of history. This paper reports on one case study in the second phase of a larger study. In this second phase intervention was carried out in the form of the training of four of these teachers to teach source analysis and historical enquiry in a systematic manner.

## **Introduction**

Currently, in many classrooms, history is taught through teacher-centred activities. This involves techniques like memorization of facts, lectures, and a heavy reliance on textbooks (Rice & Wilson, 1999; Wilson, 2001). In Singapore, though assessment has changed to include source-based questions, most teachers interviewed in phase one of this research, teach content followed by an examination style assessment. The change in the history syllabus which includes the need to understand the nature of evidence by emphasising history as an enquiry process and by developing the range of skills required to interpret source materials is in line with the changes that has been occurring in our educational theatre.

Since 1997, teachers in Singapore have seen major changes taking place in the educational theatre. This started with the Singapore's government concern with preparing our workers for the twenty first century. In 1997 the Ministry of Education announced the need to build 'Thinking Schools, Learning Nation'. This was followed by a suite of initiatives that recognises that the traditional teacher-centred and rote learning to pass examination style of pedagogy need to change if we are to meet the "demands for new skills, knowledges, and flexible competencies for globalised economies and cosmopolitan cultures" (Luke, Freebody, Lau & Gopinathan, 2005). All of these initiatives were followed by policy changes to ensure that change will take place. However, whether these policy changes have yielded change in the classroom has not been empirically studied.

Where history is concerned, teacher training for the new syllabus included content training as well as training on how to set and mark examination papers for source-based questions rather than training on the nature of history and on history pedagogy. Thus the second phase of this proposed research is based on the understanding that teachers cannot teach and thus students cannot learn second-order understanding if their subject matter knowledge of the discipline is vague. They cannot just teach their students how to handle sources for the examinations without engaging in the thinking that characterises true historical interpretation and enquiry. Teachers have to design activities that engage students in historical cognition without yielding to the tempting assumption that disciplinary tasks mechanically develop historical thinking (Bain, 2000). "Anything that impels teachers to treat history in an algorithmic or mechanical way is likely to be disastrous" (Lee, 2001). Students will meet rival historical accounts outside of school, and unless they are given some tools for handling such

differences they will fall back on the ‘fact/opinion/propaganda/choice’/reliability mode that have been mechanically taught to them by their teachers.

## **Literature Review**

The focus of this research is on teacher change and teacher knowledge bases in history education. Both history and research into teacher change have been controversial topics of discussion in the past several decades. In the case of Singapore, curriculum reform has created a context for teacher change, specifically in history education. However, to date, there has been little research that looks at history curriculum change in Singapore from the perspective of the literature on teacher change and teachers’ knowledge bases. This section therefore will review literature on teacher change and teachers’ knowledge bases, specifically in the contexts of history and history education.

### Teacher Change

Until the early 1990s literature on teacher change, concluded that teachers do not change, that change hurts and that is why people do not change, and that teachers are recalcitrant (e.g., Duffy & Roehler, 1986; Fullan, 1991). The literature suggests that teachers resist doing whatever is being proposed because they want to cling to their old ways. However, in her work with teachers, Richardson (1998) noticed that they undertake change voluntarily, following their sense of what their students need and what is working. Teachers assess their desire to change on the basis of whether they work, fit within the teachers’ set of beliefs about teaching and learning, engage the students, and allow the teacher the degree of classroom control he/she feels is necessary.

Chin and Benne (1976) described three types of planned change strategies:

1. empirical-rational approach,
2. normative-re-educative techniques and
3. power-coercive approaches.

In the Singapore context, very frequently the change process is that of the empirical rational approach. Thus the changes since 1997 was change directed from above. However, this study is looking at the normative-re-educative conception of change. In recent years, the literature in teacher change has shifted to the second of Chin and Benne’s change strategies (change comes from individuals involved in the process, in this case, from the teachers themselves in collaboration with the ‘other’) as this strategy has recently been recognised as an important avenue for significant and worthwhile change. This change is seen as naturalistic in that they focus on providing autonomy for and cultivating growth in the people who make up the system and on increasing problem-solving capabilities of the system.

Richardson and Placier (2001: 908) considers that any research on naturalistic change is complex. In the naturalistic change research, an assumption of change is present, and the questions are: How do teachers change? In what direction? And why and when do teachers change? Are there different approaches to change, and what affects those differences? These questions are designed to lead to theories of individual change. Studies of naturalistic change often take place within a planned change

process, but the form of the change process is usually voluntary and collaborative, and the focus of the studies is teacher change. Like Richardson and Placier my study focuses on these questions and deal with individual teacher change.

A corollary to change is that it would lead to better teaching and thus benefit students. Carter (1990) reframes what “learning to teach” means by grounding the process in terms of knowledge acquisition that is directly linked to classroom practice. She suggests that the focus needs to change from a global to an explicit level that attends to what is learned and how that knowledge is acquired and concludes that apart from broad-stroke generalizations about complexity and multiple interactions few other conclusions can be drawn. Three approaches and accompanying research programmes that would influence the meaning of learning to teach are suggested by Carter. These include information processing, practical knowledge and pedagogical content knowledge. She also suggests that case methodology be used to tap these knowledge sources and ways of thinking about learning to teach as it may prove promising for richer understandings of knowledge construction and pedagogical learnings.

This is the focus of the present research - to understand what would make teachers change we need to study cases of teachers and look at the particular, how they process information and what pedagogical content knowledge they have for a particular discipline. We can then see how teachers’ professional learning is translated into practice and how they can be helped to change. Each teacher, classroom and school and the interactions amongst them is unique thus to do research based on a global level and broad-stroke generalisations would not do justice to an enterprise that is so complex.

In particular I will be studying teachers’ subject matter knowledge. Without these, attempts to ensure change would still fail as authorities and researchers would work on the assumption that teachers are all experts in the area that they have to teach. The teacher as a person has been neglected in teacher development (Fullan and Hargreaves, 1992; Richardson, 1998; Richardson and Placier, 2001; Day and Sachs, 2004). Most approaches to staff development either treat all teachers as if they are the same or stereotype teachers as innovators, resisters and the like. Most strategies fail to take into account teachers’ knowledge bases and consequently fail to be effective for many teachers.

Shulman (1986) suggested that there were seven categories of knowledge bases for teaching. Of these, content knowledge or subject matter knowledge is the concern of this research though all the others have to be taken into account if we want to consider the whole teacher. In 2001 Turner-Bisset came out with a more explicit model of knowledge bases for teaching. Of interest to this research is that she split Shulman’s subject matter knowledge to substantive knowledge and syntactic knowledge and included teachers’ beliefs about the subject, another important criterion for our understanding of teachers’ knowledge bases as this would also affect how they teach in class.

Turner-Bisset (2001) suggests that in the subject disciplines, different conceptions of the nature of the subject or different paradigms can affect the way one perceives that area of human activity. It is thus necessary for the teacher to have deep knowledge of and passion for a subject. The deep

knowledge must comprise knowledge of substantive and syntactic structures, and beliefs about the subject. If one believes teaching and learning to be a transmission of knowledge, this belief will shape one's thinking, discourse and actions in the classroom. She also argued that it is quite possible to study a subject up to A Level, and even degree level, without ever gaining an understanding of the essential structures of the discipline and that without understanding the structures of the discipline, there will be no notion of deep understanding of a subject, or of subject mastery. Thus teachers who lack knowledge of the syntactic structures of the subject matter will fail to incorporate that aspect of the discipline in their curriculum. A lack of syntactic knowledge may also seriously limit prospective teachers' abilities to learn new information in their fields (Grossman et al. 1989, p. 30).

What does this mean for teachers and teacher education? As part of subject knowledge, they must come to know the structures of the subjects they teach. As far as syntactic structures are concerned, one would need to map out which skills and processes are fundamental to a particular subject. The mere process of engaging in consideration of the essential substance of a subject, its organising paradigms and key concepts, and in the syntactic structures of how knowledge or understanding are produced within the subject, may force one to look at the subject differently, and to comprehend it in ways which might have been hidden before. However, having rational knowledge from and of a field is very different from having to teach it. Thus professional development must come in to help teachers to prepare for this new knowledge and thus plan lessons to teach that subject differently. It is with this background in mind that the following section studies the literature on what is history and historical understanding.

### History and Historical Understanding

The subject of the discipline of history has undergone serious debates in recent decades. It has ranged from Acton's belief that history is an objective study of the past, to Carr's (1961) conclusion that it is "a continuous process of interaction, between the historian and his facts, an unending dialogue between the present and the past". Tosh (2002), Evans (1997) and Marwick (1989) further add that history has relevance to society, as a person trained in the discipline will be able to look at any written work critically and judge the validity of the claim by going back to the sources.

Thus historians use evidence to create a construct of the past. The account that is written and the concepts that accompany these accounts like civilisation, governments, trade, etc. are known as the substance of history. The construction of that account is known as second order knowledge or the discipline of history (Ashby, Lee, & Dickinson, 1997). These include concepts of time, change, causation, empathy, evidence, significance, concepts of progress and decline and historical agency and how students view historical accounts (Holt, 1990; Seixas, 1996; Lee, 2001). When one is able to grasp these two aspects of the discipline, substantive and second order or syntactic knowledge, historical understanding occurs. Thus learning history is more than memorising facts. Just as historians work to give meaning to historical facts so students must work to give meaning to their historical experiences (Bain, 2000) and understanding.

Source-based assessment in history in Singapore basically addresses students' historical understanding. Though all aspects of historical understanding come into play, the focus is on the ability of students to study sources as evidence of the past and interpret the sources, that is, the use of second-order ideas or syntactic knowledge. Learning to think historically requires certain strategic knowledge dispositions that include the capacity to (VanSledright, 2002: 134):

- make sense of many differing sources of information from the past,
- corroborate evidence by carefully comparing and contrasting it
- construct evidence-based interpretations, and
- assess an author's position in an account.

However, Wineburg (2001: 7) claims that historical thinking is neither "a natural process, nor something that springs automatically from psychological development". According to Fling (1994) historical method cannot be taught successfully by a teacher who does not know what it means or who has never applied the method. This study is thus important because 2000 is the first time the process of history is introduced into the history and social studies curriculum in Singapore and following Turner-Bisset, Wineburg, Fling and Lee's argument many of our history teachers do not have a clear conception of the subject matter knowledge of history and are struggling to handle a set of skills which they themselves have never applied nor been taught how to teach. They would thus not be able to provide students with the intellectual apparatus for handling history.

#### Research on history education through the use of scaffolding

I now look at two empirical studies that use scaffolding in the teaching of history. These are practitioners reporting on their own work in schools. Their scaffolds were used as examples in my training.

Claire Riley (1999) a teacher in a school in the UK developed and improved on the 'layers of inference' scaffold which was taught to her in her Postgraduate Certificate in Education history pedagogy course. Her rationale for using the 'layers of inference' in class is because very frequently students do a surface reading of the source and miss out important points that could have been drawn from the source or discard the source as bias and move on to the next source. Riley used the 'layers' to get her students fascinated with texts and pictures, moving students into rigorous, extended and historically-grounded responses. The significance of her work is the relationship between evidential understanding, period knowledge and development of literacy. There are four levels to her layers and each layer has a question to guide the students. The questions are:

1. What does the source definitely tell me?
2. What can I infer from the source? (What does the source suggest?)
3. What does the source not tell me?
4. What else would I like to find out? (What further questions do I need to ask?)

The value of the four questions is that the student is immediately moved away from a surface examination of the source, onto a complex and precise consideration of the usefulness of the source

on a variety of levels. Riley also emphasised that a 'Big Question' must govern the source interpretation. She reiterates that it is vital that the teacher stresses, repeats and displays constant fascination towards the 'Big Question' lest the students get lost in the questioning of the source and forget what the 'Big Question' is.

Gorman (1998), who used to be a Head of Humanities in a community school in the UK, described and analysed his own practice. The main theme of his research is the tension between structure and independence in teaching the practice of historical enquiry. Like many researchers, Gorman believes that "pupils will not become independent learners just by being given more independence" (p.20). He used a model to scaffold his students' enquiry into historical issues. The scaffold when used repeatedly will teach students to enquire on their own, thus the paradox of moving students towards independent enquiry by first tightly structuring students' historical enquiry.

As can be seen from the above literature review the researchers place the teacher as the central figure in the change process; that history is not about an agreed upon body of knowledge but is one that is constructed from available evidence. It is a complex discipline that requires teachers to scaffold students understanding and if done in the correct manner, students will be able to handle history in all its complexities.

### **Methodology**

This paper covers only part of phase two and three of a larger Doctor in Philosophy study. The research questions for the whole study are:

1. What are Singapore history and social studies teachers' understandings of historical understanding?
2. Will an intensive collaborative-researcher intervention enhance teachers' beliefs and practice in secondary history / social studies education in Singapore?
3. Will this in turn enhance students' historical understanding?

The research uses a quasi- ethnographic study which is divided into three phases:

#### Phase One

This phase sets the stage for phase two of my study. It involves semi-structured interviews of 24 teachers, lesson observations of selected history teachers and interviews of their students for triangulation purpose. A pilot study of the intervention was also carried out.

#### Phase Two

This is an intervention phase to study the development and trailing of teachers' use of scaffolds both to help students analyse sources and pursue an historical enquiry using sources. This research thus hopes to add to the knowledge base for historical understanding and teacher change.

#### Phase Three

This phase uses the semi-structured interview method to interview the teachers involved in my actual intervention phase and the same students of these teachers that I interviewed in the first phase to

evaluate whether teachers and students historical understanding have changed as a result of the intervention.

The second phase will be a collaborative-researcher study using design-based research or design experiment (Kelly, 2003; Cobb, Confrey, diSessa, Lehrer and Schauble, 2003). According to Kelly, the experiment is directed primarily at understanding learning and teaching processes when the researcher is active as an educator. Design experiments are extended (iterative), interventionist (innovative and design based), and theory-oriented enterprises whose “theories” do real work in practical educational contexts.

Each of these teachers will be studied as a case, what Stake (1994) calls the collective case study. These cases will then be analysed in terms of their specific and generic properties. I have decided to use the case study approach as it allows me to learn, not only the process of learning about the case but also the product of our learning. According to Campbell, 1975 (in Stake, 1994) case study can be a small step toward grand generalization. Since every classroom is a complex ecology in itself – each teacher and class of students having their own mental constructs, classroom climate, school ethos, etc. it would not be wise to expect transfer of knowledge, learning and change to occur simultaneously and in the same manner. Thus the choice to study them as a collective case study so that the differing experiences can be described and hopefully the cases added to our growing knowledge of how knowledge can be constructed, how learning occurs and how change can occur both from the teacher’s perspective as well as that of the students.

The intervention process consists of a two and a half day workshop. The four teachers involved were informed about the discipline of history and its nature and what constitutes historical understanding. I then modelled Riley’s ‘Layers of Inference’ frame for source analysis and allowed them to practice with it. Next we looked at Gorman’s ‘Structured Enquiry Approach’, and walked through the structure with the teachers with examples from the lower and upper secondary syllabus. They were then given time to plan lessons for semester one syllabus where they will start with source analysis and plan at least one issue to do a historical enquiry on.

The rationale for spending a considerable time on source analysis is that in order to do historical enquiry one has to be able to analyse the source well. What I will be looking for whilst studying each teacher case would be the particular, how the teachers process information and what pedagogical content knowledge they have for a particular discipline, focusing on syntactic knowledge. We can then see how teachers’ professional learning is translated into practice and how they can be helped to change.

### **The Story of Edmund**

Edmund has been in the teaching service for four years (2004). He teaches History and Social Studies in a neighbourhood autonomous school. He graduated from the university with a degree in Political Science and Economics and was offered History and Geography as his teaching subjects. He had taken Geography at the ‘A’ levels and in his first year in the university. He only studied history

for two years at secondary one and two where it is a compulsory subject. He was offered history as a Curriculum Subject 1 because MOE offers history to teachers who have done political science.

#### Background of his school and the class that he teaches

Edmund teaches in an autonomous (these are schools that are given a greater level of autonomy to run their programmes) mixed neighbourhood school which has been in the top of the schools ranking system for a number of years. Under the old system where schools were ranked individually, Edmund's school was ranked 13th position in 2003 and under the new ranking system where schools are placed in bands; Edmund's school was ranked Band 2.

The class which was involved in this research project is a Special Stream class, where students who achieved the higher marks in the Primary School Leaving Examination are placed. The average T-score of the special stream students in his school is 253. Students from the Special Stream take both English and Mother Tongue as first language and may take a third language if they wish.

There are 39 students in the class and this particular class is of the high ability end of the cohort and is especially strong in the English Language. The students in this class are studious and diligent. They have a need to achieve and are sometimes arrogant when learning new skills. They appear to be less structured than his other special stream classes and are less willing to take regimented lesson styles.

#### Educational Beliefs and Beliefs about Teaching

He believes that education is about information training, building students' character and values

*“and ..., perspectives...the essence is to, impart,..., the passions and the excitement ..., into the kids, and into their young minds about learning and relearning and exploring ..., that includes winning and losing, social skills, ....”*

He was offered History and English Language as his teaching subjects but he asked for geography to replace English Language instead. He said that he was more comfortable with geography than with history. He has no grievances against teaching just against the establishment. He admits that he is basically anti-establishment.

#### Beliefs about history, history teaching and how students learn history

When asked what history is, Edmund commented that he never liked history as he found the way it was taught to him lacking in inspiration. When he talks about what he liked or did not like about history it was basically the types of history: visual and oral, art, medieval, modern – no mention was made about the process. When I led him back to the subject of history and asked him whether he thought history is a discipline. He responded and said that up to late last year he never saw it as a discipline, but a book he read made him realise that to be good in history you need to have a wide coverage of the world so that you can

*“draw relationships, ... connection by time,...you can have thematic but you can't have topical..., even if ..., within ten years you have to do a lot... the ability to ..., do a lot of analysis and maybe a lot of cross referencing, ..., before you talk to your students.”*



He added that asking good questions is another aspect of the discipline of history. From this description, it is apparent that Edmund has some conception of the syntactic knowledge of the discipline but this conception is not fully formed nor was he entirely certain. Probably the introduction of source-based assessment helped him to realise that history is about enquiry. But this conception is vague and is to a large extent governed by what he was taught in preparation for the revised syllabus i.e. only in connection with the assessment.

When asked how he made history relevant to his students, Edmund said he used a lot of audio-visuals. He will show them a clip and ask them questions relating the event to current or parallel events. When he teaches ancient civilisations he will try to tap on the “*effective domain... to bring them into ..., sense of struggle, especially if you are living in the Shang Dynasty, if you are peasants.*” When asked whether he meant empathy, he replied in the affirmative.

He continued to struggle with terms that are used by historians. He has not heard of the term historiography, and was not sure what is meant by historical concepts, when I asked whether these were terms that were specially related to history he asked whether I meant change and continuity, cause and effects and whether it had to do with human patterns. Thus like a number of our teachers, Edmund is aware of certain syntactic aspects of history as this has been taught to them since the last syllabus revision of 1994.

He was then asked to explain why sources disagree and replied that it depends on the “*target audience and when you link back to the target audience and you talk about the intention of the, of it, to arouse different types of feelings, against for*”.

It can thus be seen from this that Edmund does have some understanding of the nature of sources but this understanding may be inferred from the new assessment (he used the term ‘target audience’ which can be found in the University of Cambridge Local Examinations Syndicate’s (UCLES) examiners reports) rather than a real understanding of the relationship between how sources are used to create history and the process that historians have to go through to write history.

When asked about his beliefs about history teaching, he feels that the content should be reduced but that history teaching is still very much content teaching but when probed further he said

“*maybe, the last word that you used, ‘the enquiry approach’. They have to start off as a rebel, ..., I want to teach my history students...to be tenacious, a learner ..., challenging ..., content,...if you start off...with such great deal of conformity right? ... You don’t learn much. You only absorb.*”

Thus he wants students to question, not just absorb content.

Edmund says that he will teach the skills ahead of the content. He says he will probably teach 30% content as he cannot put his students at a disadvantage in case they do not do well during examinations. He feels content and skills should be taught separately, having a separate teacher who is better at teaching skills and enquiry, but there must be synthesis of the two. However, he went on to say that maybe there should be synthesis of history together with geography, literature and the social science an idea he developed after he read about the new integrated programmes that some schools are

offering. Thus it can be seen that Edmund has very vague conceptions of the discipline of history. He tries to amalgamate all he has read or all the new ideas that have been introduced by the education system into the subjects that he teaches without fully understanding each of the disciplines.

When asked about teaching history skills, he did not associate it with historical enquiry. I had to lead him by questioning him about the skills of source analysis and enquiry. When queried whether he believed that source interpretation is part and parcel of history, he agreed. He makes use of the workbook to help him introduce the skills after content teaching. The textbook and the PowerPoint slides provided by the publishers for the textbook have sources in them as well so he uses them to help him in skills teaching. I have however, observed him when he tried to use sources in his lessons. There was no systematic manner in getting the students to analyse the sources. Whatever, comes into his head becomes the question which he will ask his students.

It can thus be seen that most of Edmund's beliefs about history are shaped by his own personal beliefs, what he has been trained in for source-based assessment and whatever little he has been able to read about education in general.

When asked how he teaches historical skills and whether he has problems teaching them, Edmund replied that he had a really tough time two or three years ago. Students could not understand why certain things happened and "*why after shaking hands, parties end up killing each other*". It was only when he started to use Venn diagrams was he able to help students understand the relationships. So he realised that to teach historical skills he needed a frame. It is obvious that Edmund has mixed up historical skills with concepts. I then got him back on track by asking him about the skills of source analysis. He said he had problems helping the students to read, "*to cross-relate it to whatever they have learnt and after that, produce a written text that feeds the answer to the question...and that point of time there was such a big confusion about use of background knowledge in level 4 or is it level 3. The source is only one point in time and they have ... to bring in the, all the relationships, all the conditions coming in both context and cross-reference. The students were not able to do so many things at one time*". When he teaches them how to read sources the first thing they have to do is look at the questions that come with the source. Thus for Edmund, source interpretation relates to an examination-style assessment format. This is very obvious when he says that there is always confusion over level 3 or 4, the marking scheme which (UCLES) uses to assess source-based questions. However, he was able to state on his own that without the question the source is meaningless. It is thus obvious that Edmund is not aware of how to go about teaching source interpretation and is not consciously aware of what the skill of historical enquiry is.

Edmund believes that students' best learn history when they have a positive attitude and when there are overseas trips. He also adds that students' best learn when they use their senses, he does not like lectures as he believes it is monotonous and one way. He then went on to include other ways in which students best learn but again these are general pedagogies rather than specific to the learning of history – table arrangements, large class sizes.

When asked whether students found it difficult to learn historical concepts, he concurred. He gave the example of the terms ‘democracy’ and ‘treachery’. They had two problems: firstly with understanding the term and secondly because of their “*shallow social experience*” they cannot understand why Hitler could be so treacherous. When I asked whether he meant they had problems with empathising with the way Hitler acted, he agreed.

When asked whether students find the skill of historical interpretation difficult. He replied instead that they fear it especially the Express classes. He clarified that these students feared sources because there is no perfect answer. It can thus be seen that students are held back from analysing the sources well because they feel there must be a right answer. This problem not only reflects their belief that to do well in the examinations there must be a correct answer but also the belief that has been passed down to them through the education system. It also shows that their history teacher has not been able to fully make them comprehend what history is as they still expect there to be only one right answer.

He continued to say that “*Singapore kids still go back to ..., patterns. They want to be spoon-fed, they want fixed drilling methods*”. Often he has no choice but drill as he is answerable for their examination results. When asked whether preparing them for the examinations by going through (Levels of Response Marking) LORMs with them is skills teaching, he said that it is not but that he has to preserve his department’s Mean Subject Grade (MSG) and status. However, he believes that his students have no problems with the skill of source analysis; they can dissect the sources well. Evidence from the sources which four of his students were asked to analyse during the pre-intervention phase suggests otherwise. They missed out huge chunks of information from the source and made assumptions and inferences that have no support from the source.

When asked whether he had attended any courses since the new syllabus was introduced, he replied that he went for the three, half day sessions that was conducted by Ministry of Education (MOE) on how to mark and assess source-based questions in 2000/1 and has shared source-based papers with other schools. However, he has not attended any courses on how to teach students to analyse sources, or on how to do historical enquiry, i.e. historical skills.

It can thus be inferred that the 2000/1 syllabus had one aspect which was new to the teachers and that is teaching history as an enquiry into the past. Even though the 1994 syllabus did introduce the notion of this into the objectives, sources was only used as a stimulus in assessment. The teachers were briefed on this but there was no training on how to interpret sources or use sources for enquiry. Thus no head knowledge took place and teachers immediately forgot about this aspect of history because they were not trained nor expected to teach history in this manner.

#### Description of a typical history lesson

He hesitated when I asked him to describe a typical history lesson that he teaches because it was obvious from earlier conversations that he quite often has to toe the line to produce the results. So I decided to ask him to describe a lesson that he was happy with. Basically he described a lesson that allowed the students to move around, debate and defend their line of thoughts.

From this description, I can see that Edmund is comfortable with certain aspects of the knowledge bases that an expert teacher needs. He shows awareness of curriculum knowledge, general pedagogical knowledge, knowledge of learners and their characteristics and knowledge of educational contexts. What is missing here are certain aspects of subject matter knowledge – syntactic knowledge of history with specific reference to historical analysis and enquiry. This is not surprising considering the number of years he has taken history and the type of training he has received.

#### Pre-intervention observations

Edmund was observed a total of four times. Though Edmund used sources in three of the four lessons observed the lessons supported his conception of history and how students learn in the interview. However, the use of sources and emphasis on the work of a historian could be because he is completing the chapter on ‘what is history?’ His use of sources was unfocussed based on what was provided in the package which comes with the textbook his school adopted. Only in the second lesson did he show some signs of syntactic knowledge – student were assigned a mini-project where they are supposed to act as historians and Edmund informed them about the criteria to judge the mini-project and commented on groups whose work reflects good investigative skills. However, because he has not been properly trained his uncertainty about the process of history is reflected in his comments about using a time-machine to check on accuracy, about the accuracy of history, and when he used sources there was no attempt to teach his students how to interpret sources. His knowledge of historical enquiry is gleaned from the first chapter in the textbook, enrichment exercises suggested from the package given by the publishers of the history textbook and the workbook.

#### Student Pre-intervention interview

Four students of varying ability were chosen by the teacher for the interview. The questions asked were:

- What is history?
- How do historians know about the past?
- How is history taught?
- Does your teacher use sources when teaching? Did your teacher teach you how to read sources?

The students’ answers show that Edmund had not succeeded in inculcating the idea of the nature of history in his students in spite of having completed the chapter on what is history and the historians work. They all repeated the idea of history as a study of people of the past and about learning from the lessons of the past. Most of them believe that historians use artefacts most of the time. This could be because the first chapter in the textbook emphasizes this. But it also shows their teacher’s lack of understanding of syntactic knowledge. If the teacher is more aware of the workings of a historian and the textbook talks mostly about artefacts, the teacher would have corrected this misconception.

Edmund’s students’ descriptions of how he teaches history matched my observations during the pre-intervention period. He uses a lecture cum question and answer style and intersperse these with sources – most of which are artefacts as these were the sources given to him as part of the PowerPoint

package by the publishers of the history package that the school adopted. It can thus be deduced that Edmund does try to introduce the craft of the historian to his students. As one of his students commented, when he comes up with a series of questions to get them to investigate the source, sooner or later the students would be able to figure out the types of questions to ask. That is my major worry. The type of students that Edmund has are intelligent students, however, only one out of four that were interviewed made that deduction. Moreover, so far he has only used artefacts. Historians frequently use written sources. From my study of Edmund's source interpretation of the piece of work given to him and that of the two sources given to his students it can be seen that Edmund and thus his students miss out relevant information in the sources they have to interpret.

From the last two set of interview questions asked one can deduce that though Edmund introduced sources to his students and asked them questions it was not done in a very systematic manner and even though the textbook mentions the 5 Ws (Who? What? When? Where? Why?) and 1 H (How) questions to be asked and this is reinforced in the workbook, Edmund did not use the workbook's systematic questioning style probably because no training for the pedagogy component was included into the training of teachers for the new syllabus.

Edmund's lack of knowledge and training in the pedagogies for this 'new' knowledge can thus be inferred from his interview, the pre-intervention lesson observations, description of how he would like to teach history and in his students' pre-intervention interviews. Instead what one see is general pedagogic knowledge like multiple intelligence, cooperative learning, and teaching of thinking. His attempts at using sources are piece meal, he introduces sources into his content teaching and to his credit he tries to show his students what history is about. However, it can be deduced that he needs help to develop his syntactic knowledge of history specifically that of source analysis and enquiry. Though he tries to incorporate analysis of sources he does not use scaffolds to help his students.

### Pilot Study

The pilot study attempted to inform the teachers the syntactic structures of history and how this is linked to the new assessment and train the teachers to use scaffolds to help students analyse sources.

Lessons learnt from the pilot study:

- Need to remind the teachers to model the frames for their students
- Sources used initially should be something that students are familiar with
- Teachers and thus struggled with frames because of their unfamiliarity with the frame and the process of history
- In the Singapore context more time had to be spent on the first two layers and more scaffolding needs to be given to layer one because students either cursorily study the first layer and jump to the last three layers making inferences and assumptions with little support from the source or do not know what types of questions to ask to draw out the content from the source. The participants needed more hard scaffolding. I thus advised Edmund that he may want to ask the 5Ws and 1 H questions to help himself and the students along for layer one (Comprehension layer).

- On a more positive note – after Edmund tried his lessons with another class after the reflection and feedback sessions he told me that he can observe improvements both in himself and his students.
- Riley’s ‘layers of inference’ frame need to be modified to fit the Singapore context.

### Intervention Observations

As mentioned in the previous chapter the teachers were invited for a two and a half day workshop in early Nov 2004 in which I spent more time in discussing the subject matter knowledge of history concentrating on syntactic knowledge and historical interpretation and enquiry. I also emphasised on the four layers of the scaffold for layers of inference and clarified each layer, spending more time and walking through each layer with them. I also spent more time on the scaffold for the structured enquiry approach. We then discussed what they would do next year when I would come in for the intervention observations and they were asked to group themselves according to the topics they will be teaching in the next semester and start planning for the next semester.

I observed Edmund for a total of nine sessions from the period March – Apr 2005. It was the same class that was used in the pilot study. I have divided the observations into 3 stages:

Stage One – Teach source analysis by using first two layers of layers of inference scaffold

Stage Two – Teach source analysis by using the whole frame

Stage Three – Teach using an adapted version of the structured enquiry approach

### Stage One

In the first three observations, (refer to Appendix -Table 1) Edmund tried to regroup what he had taught the class last year. He was struggling with his understanding of the syntactic structures of history and with the layers of inference scaffold. He had started off by showing his students the scaffold without first modelling the scaffold with them and as a result the students continued with their old habits of just skimming the content. Edmund consulted me before his first observation session and I advised him based on my observations of my other three cases who had started earlier, that he may want to use a source that they are comfortable with and a contemporary source so that they start off from their comfort zone. I also advised him that he had to explain why they are doing source work i.e. to explain the purpose of source interpretation and how this is linked to doing history.

Edmund started the lesson on 29 Mar by discussing what history is and linking it to source work (Move 1). In Moves 2 - 5 Edmund re-introduced the use of the layers of inference to scaffold students’ interpretation of sources with a contemporary source which students are familiar with – an advertisement. He used a DHL advertisement. He had reduced the frames to the inference level as I suggested and adapted it for his class. He told the students to train themselves in drawing arrows to show the linkage of how their questions and answers are built up through the layers so that in the end all linkages go back to the source. This was something that was included in the layers of inference which he had not used during the pilot study and which I pointed out to him. He started by getting students to ask the basic 5Ws and 1H questions (Move 7). Students were more focused on the

comprehension layer as the last two layers of the frame were now absent and they were given the 5Ws and 1H guideline to ask questions. When they asked questions that the source could not answer, for example: ‘Who was the target audience?’ he told them that they should park the question outside of the first three layers and come back to it later. (He had not included the source provenance for the students.) He told them to letter each layer. So layer 1 is point A, layer 2 is point B and questions which they cannot find the answers from the source will be placed outside the frame at a point called C. In Move 6 I observed Edmund’s uptake of the scaffolds when he made the connection between the scaffolds and his students’ thought processes.

Students were given time to draw inferences from the content layer which he had walked through with them. He went around checking on their work and making comments on it. So when students were not able to make a lot of inferences, he told them that that was because they did not ask enough questions of their first layer and so there would be little inferences to make. When a pair of students inferred that DHL is flexible and efficient in their services, he asked them where from the first layer the inference came from. When they told him it was from the fact that DHL used rail, road and air to make delivery, he told them that that piece of information suggest flexibility but not efficiency. What the pair did was that they have made an assumption based on the fact that one of them has used DHL before, not from what the source shows. In Move 8 he went through their answers with them and asked them to support their inferences from the second layer. Students came up with inferences like “comprehensive and international” because of the fact that the advert showed the many countries that DHL operates from, the motto “We Move the World”, that it is a big company because advert said that they had 17,000 employees, that they operate with speed because of the picture which showed a van with its rear end blurred out. A student answered that the company made a lot of money because they have a lot of factories. Edmund then queried where he got that information from. Where in the source did they get the idea that DHL has factories? What sort of questions needed to be asked to see whether DHL made a lot of money? i.e. what are the missing connectors to the first layer? Students then said they needed to know how many customers DHL has, how much are their charges for their services. Edmund told them that these questions cannot be found in the source, they thus have to park it at point C. They can go into the internet to find out the questions that are parked at point C on their own. He then gave them another advertisement which he wanted each pair to do on their own as homework. It is a Malaysian Airlines advertisement announcing their business class services.

It can thus be observed that Edmund has become much more comfortable in helping students analyse sources in detail. The extra time spent in a half day workshop for the pilot study held in Sept 2004 and the two and a half day workshop for the actual intervention study helped him understand the processes of history as well as the use of scaffolds better. The fact that for his first observation, he used a source which the students are familiar with – a contemporary advertisement also helped the students to ask more relevant questions. His reminder for them to use the 5 Ws and 1 H questions helped the students to be more focussed in their questioning of the content and lastly the fact that he

cut the frame to the first two layers forced the students to really focus on the content of the source thus leading to a richer reading of the source before moving on to the more difficult layers, made this lesson a more successful one than those I have seen in his pilot studies. The observations on the 31 March 2005 and 5 April 2005 reinforced my conclusion that Edmund has incorporated the first two layers of the scaffold into his mental model and see the connection between the scaffold and the process of doing history. It could be observed that students were more focussed on studying the content and asking relevant questions that would draw out information from the sources used and making inferences that are based on the source rather than making inferences and assumptions that had nothing to do with the source. In each lesson, Edmund became more confident in his questioning of the sources and making the linkage for the students with history. It can be inferred that when Edmund finally understood the process and see its relationship with history i.e. what I call the 'ah ha!' moment, the points that he made to bring the ideas across was no longer forced and mechanical – something 'imposed' by the other, but it has become his own. This can be concluded from my observations of his three lessons: 29<sup>th</sup> Mar – Moves 1, 6, 7 and 8; 31 Mar – Moves 4 and 5 and 5 Apr – Moves 2, 3, 4, 5 and 6. Once he owned the knowledge it can be observed that his students also begin to understand the process and how it is related to history.

### Stage Two

The lessons held on 8 Apr, 12 Apr and 14 Apr were lessons in which Edmund moved the students from the first two layers and now use the entire frame to help scaffold students source analysis. (Refer to Appendix – Table 2).

Edmund's lesson on 8<sup>th</sup> Apr started by him reminding his students that there was a need to ensure that the first two layers were well studied. It can be observed that Edmund was very comfortable with this part of source analysis by now (Move 1). He then very smoothly segued into how layers 4 and 5 of the frame is to move students beyond the source that they are looking at to look for other sources that would help them understand the issue better as one source alone is not enough to understand the issue (Move 2). When he asked his students what does it mean if they know more about the advertisement one answered that they would be better informed customers. The students had no problem asking questions in layers 4 and 5, as when we first started this project those were the layers they first jumped to. However, this time around the questions were more relevant as students have now studied the source in greater detail. Edmund ended the lesson by reminding them that historians asked a lot of questions and by being curious one moves from a narrow to a wider perspective of the world (Move 8). Thus Edmund has really made a great leap in his understanding of the syntactic knowledge of history.

In the next two sessions however, the progress that Edmund made seemed to be frozen. He used a video to introduce the new topic of causes of World War I. However, the video that he used was more an autobiography of Franz Ferdinand than on causes of World War I even though the causes of the war can be drawn from the video. I also informed him that historians would normally not use a video



as a source to find out the causes of a war. On a positive note is that Edmund now remembers to give the students an issue to investigate (12 Apr - Move 2), the students did very well in filling up the first two layers of the frame (Move 4). When this project was first started, their study of the source was very cursory. The other positive note was that when the students judged that Franz Ferdinand is cruel because he loves hunting (Move 8), Edmund was able to comment that they needed to interpret source based on its time and place not theirs (Move 9). This was in marked contrast to some of the pilot lessons that I observed where Edmund missed out the opportunity to point out to his students when they made judgements of historical events based on their present day beliefs and values. This ability to interpret historical events based on time, place and values that are part of that era is an important aspect of historical interpretation.

### Stage Three

Edmund in consultation with me felt that his students are now ready to make an enquiry into an issue since they are now able to analyse individual sources fairly well. So in these last three observations he introduced an adaptation of Gorman's structured enquiry approach and attempted to get his students to do an enquiry into the issue of why the Japanese became involved in the Pacific War. (Refer to Appendix – Table 3).

Edmund is once again faced with new knowledge which he has not tried before. Gorman's structured enquiry approach required the teacher to introduce an activity that would fire the students' curiosity enough for them to ask questions. Edmund upon advice from me because it was a first attempt and because of the shortness of time decided to have a harder scaffold. So his plan was that he would come up with the enquiry question himself and would even provide them some sources of which they would have to pick out the relevant sources that would help them enquire into their issue.

In the lesson conducted on 19 Apr, Edmund made the link between World War I and World War II, and showed the relationship between war in the European and Pacific Theatre. He then showed them a video on Pearl Harbour (Move 2-3). However, he did not tell them the purpose of the video. Next he guided them to raise several questions based on the video and provided them with the issue that they would do an enquiry on (Move 3 and 4). The class was then divided into groups of four or five, each group given eleven sources, told to study the sources and discard those that are not relevant. Each member in the group is to look at two or three sources and then pass it to the next member in the group. However, because time was short this would be carried over to the next lesson.

Edmund was back at point zero, the same position he was at when he first used Riley's layers of inference. I had to remind him that he had to inform his students of the purpose of the exercise, show the relationship between the video and the enquiry. As the lessons observed were almost on a daily basis and because Edmund was very busy I did not have the time to find out from him what his plan was. In the next lesson held on 21 Apr, Edmund gave the students verbal instructions (Move 1). The problems started coming in straight away. He instructed that each member of the group look at one source each. What happens is that because history is an interpretation, and because students in the

group were not looking at the sources together there would be different interpretations rather than one interpretation. Another thing that cropped up was that some groups decided to divide the sources amongst them and each only look at certain sources. This situation is worse off than the previous scenario as half the group would not have looked at half the sources. What was good however was that Edmund informed the students that they do not need to use the layers frame as a scaffold anymore as they should be familiar with the types of questions to ask. He is thus fading away this scaffold and moving them towards independent interpretation (Move 2).

As I walked around listening to the students all the problems that I mentioned earlier became apparent. Moreover, what became apparent was that the students were so carried away with asking questions that they forgot the issue and were just asking questions for the sake of asking questions. Another area for discussion cropped up when I noticed that in the graphic organiser that Edmund gave to the students to organise their research, he had put down reliability rather than relevance. I pulled Edmund aside and pointed out the problems to him. I also advised that he should walk through the steps of the structured enquiry with them just like he did with the layers of inference. He thus concluded the lesson by giving them the steps of the enquiry, and telling them what their finished product should be, something which he had not done before (Move 4).

In my feedback to Edmund, I reminded him that he has to inform the students the purpose of the exercise and make the link to the process of history just like he had done for the layers of inference. He also had to advise the students to look at the sources together rather than individually. I clarified with him the difference between relevance and reliability. Since his purpose was for students to discard some of the eleven sources given to them (as his exercise was to get his students to go through a 'false construct' of how a historian works when making an enquiry) as not being relevant to the issue under investigation, the column in his graphic organiser under reliability should be changed to relevance. An unreliable source can still be relevant depending on what questions you are asking. He should also tell them that this exercise is a short-cut to how a historian would work.

When I observed him for the last time on 22 Apr, the 'ah ha' moment kicked in again. Edmund was able to explain the purpose of the exercise and how it correlates to the work of a historian like he owns the knowledge and was able to guide the students in their uncertainties quite confidently (Move 1, 2 and 5). The faster pick up for the structured enquiry approach could probably be because Edmund has through his struggles with the layers of inference frame and the observation and feedback sessions with me have a greater understanding of the syntactic knowledge of history and thus needed less reminder and help when he tried to get his students to look at an issue using the enquiry approach.

#### Post-intervention interviews

##### **Edmund**

In his post intervention interview Edmund commented that there is a change in his conception of history and that the change is quite concrete. He is more wary of content teaching unlike previously where he taught content without guilt. He finds that when he teaches using the enquiry approach the

students are more engaged. When he was schooling history was taught as a narrative and taught to be memorised and he was stuck in this mode for a long time, but now he sees that history is about investigating, finding new evidence and that is not taught to his generation. Though he admits that he cannot escape from content teaching because of the need to ensure that his students have sufficient content to pass their examinations even if he spends 10 – 20 minutes on the investigative approach this will allow the students to practise the essential discipline of history, to look at evidence, to make inferences and draw conclusions. When asked whether it made a difference to the students, he said for those who have a good attitude he can see a difference in their approach to history. He gave an example of a recent test that he marked and how these students who benefited from this intervention were able to make inferences that can be traced back to the source. The structured style of the project with the use of scaffolds is very useful in building up his students' source analysis.

The project made him realise his shortcomings in analysing sources. He had thought that by using the LORMs marking scheme he was doing skills teaching but the project made him realise that he himself has not been thorough in his source analysis. He also realised that when the syllabus was implemented they were not trained to teach the skills, only on how to set and mark the source-based questions and once the syllabus is implemented in this manner, mental blocks in the way people see and use sources, are put up.

When queried about the method of training for them for this intervention where individual coaching is given, Edmund enthusiastically approves of it because immediate feedback is given and he made small incremental improvements as opposed to the norm whereby once teachers attend in-service and are then left on their own. Once teachers get back to school they would become weighted down with their normal everyday timetable and the course is forgotten after one or two attempts.

When asked when was the turning point for his understanding of the use of layers of inference, he said that it was when I suggested that he used advertisements as an example first. He began to see the relevance of the skills of history to everyday life and that was when it became part of him rather than a mechanical implementation of something that I had told him to do. He told me that he had applied what he had learnt from the project not only in classes of the same level but also with his social studies classes at the upper secondary level and that students were also able to better analyse the sources and see the skills as being relevant to their everyday life as he tried my suggestion of using something contemporary to teach the skills with first.

He also mentioned that as a result of the research he is more attuned to sources now and is better able to spot sources that he can use for teaching rather than depend on the sources in the textbook. In fact he uses the textbook infrequently now. He also said that the scaffolds helped him to better able analyse sources. He himself only started looking at sources four years ago when the syllabus was implemented and his analysis used to be random. Now he analyses the sources in a systematic manner and this makes him more thorough in his source analysis. He admits that he is guilty of making inferences without knowing where the inferences come from before.

However, Edmund feels that the new methodology for teaching history will see results in the long term rather than in the short term, as skills teaching takes time. Moreover because of the constraints of his school's expectations: having to produce results for every level, time-tabling, class size, actual teaching periods and the constraints of having to complete the scheme of work, this would make the method that I introduced difficult to implement. However, because the syntactic structure of the discipline was made known to him, he realised that what he thought of as skills teaching before does not really teach his students the skills of history but rather is teaching for examinations. He is convinced by the workshops and his own experience during the research that in order to fully understand the skills of historical enquiry, one cannot be mechanistically taught the LORMs but rather understand the process of the syntactic knowledge bases.

**Three students** (one of the students interviewed earlier has transferred to another school)

From the post-intervention interviews I was able to deduce that his students' conception of history has changed perceptibly. Though they were not able to articulate what their new conceptions of history are, they were able to say that for them history is not only dependent on information from the textbook. The use of sources made them realise that the textbook need not be the only story because the writers may have missed out on sources or used sources that are not reliable.

They found the use of scaffolds to help them analyse the sources helpful as the questions used in the scaffolds help them to study the source in greater detail. One student admitted that before the use of scaffolds her study of the sources was very messy. Though one of the student felt that the teacher should both scaffold for source analysis and teach them the LORMs simultaneously, upon further probing, she realised that she if she does not analyse the source well she would not be able to do her assessment well. All the students thus found that if the teacher had started with skills teaching first through the use of scaffolds rather than with teaching for examinations, they would better be able to analyse the sources and do better for their source-based questions. They found the skills very useful as it can be applied to their daily lives.

However, the students' post intervention interpretation of the same sources used in the pre-intervention interviews did not show much improvement. Though the comprehension and inference level showed improvement, students still take the sources at face value. This may be because the period of research is too short and there was no time to go beyond one practice for enquiry into an issue and students are still struggling with the new methods.

Thus it can be seen that even though in the short term there may be not much improvement in their source analysis, the students' and teacher's conceptions of history have changed and Edmund is now won over to 'doing' history with his students rather than content teaching.

### **Conclusion**

When one studies Edmund and his struggles to implement the new pedagogies due to the new knowledge introduced as a result of the change in syllabuses one can measure Edmund's knowledge bases in these terms:

- Edmund is aware of his school's culture and expectations. He has to complete a certain portion of the syllabus as they had a standardized examination for the level to sit for.
- He has knowledge of his students both their cognitive and social knowledge – because his students were from the Special Stream he is aware he can be more flexible in how much content he needs to cover. He knows that his students will read the textbook themselves and that they were rather impatient and concern with doing well for the examinations.
- He is aware of the general pedagogical knowledge as can be seen with his ease in doing group work, class room management, use of multiple intelligences, and others.
- He is also has some knowledge of the materials and tools he would need to teach within the range of his understandings of the subject matter knowledge of history.
- However, his beliefs about the subject are limited by his readings and training in that area. Though he is aware of substantive knowledge, his understanding of the syntactic knowledge of the subject is rather vague and not well-formed. Thus he struggled through the implementation of the two aspects of the training which I included in my intervention:
  - a) source analysis
  - b) enquiry of an issue

One of the primary reasons for this struggle is the fact that the syntactic structure of history is something new to him. Though he has some conception that history is about interpretation and enquiry, this knowledge is partly formed from the fact that the assessment for the subject now includes a compulsory source-based question, from the syllabus objectives and from chapter one of the textbook.

His first encounter with this 'new' knowledge is thus during the pilot study and as a result he struggled through his implementation of source analysis with the use of scaffolds to help his students analyse sources in a more systematic manner. As witnessed in the pilot and intervention studies as the teacher struggled with his understandings, so the students.

So it can be seen for example that at first he was not able to make the connection between the significance between the first and second layer in the layers of inference frame because he did not make the connection between the importance of the need for support when one makes inferences and that when one interprets a source, the interpretation can be traced back to the source.

However, because Edmund had the 'other', in this case myself, to collaborate on this new venture: discuss his plans, his uncertainties, observe him, he was able to concretise his understandings much faster: as his understanding of the syntactic knowledge of history increased, so his confidence in teaching for source interpretation and enquiry and so his students historical understanding.

It can thus be deduced from this project that when a revised or new syllabus is implemented which requires both teachers and students to make drastic philosophical changes in their conception of history education, courses must be conducted that would make this new knowledge known to the teachers. These courses should not only be head knowledge courses, but courses that would engage

the teachers in the process of doing history so that their understandings (in the case of the Singapore context) of the syntactic knowledge of history become part of their knowledge bases. Without proper understanding of subject matter knowledge, teachers and thus students would not be able to understand the discipline and in fact have misconceptions about the discipline. This would then be translated into their teachings and understandings of the subject and thus whatever, new changes that is required of the teachers would be jeopardised as teachers subject matter knowledge has not changed.

Edmund's journey in this research can be distilled into five components:

- Teacher's substantive knowledge for the syllabus and level he has to teach is adequate but syntactic knowledge is not well-formed
- His training on how to set and mark examination scripts for source-based questions as well as his beliefs about teaching and training acted both as a stumbling block and an aid on his acquisition of the new knowledge bases
- Subject matter knowledge of the discipline is made known to teacher
- Processes of how to scaffold for source analysis and historical enquiry is made known to teacher
- Struggle with and ownership of new knowledge

### **Implications of the study for teacher change**

Several things have to be taken into consideration if we want to see second order teacher change as a result of changes in syllabus which requires major philosophical shifts in the teachers' conceptions of the subject:

- The need to know what are the teachers' subject matter knowledge
- Training for teachers in this new knowledge
- Having a collaborator to work with teachers to help them build and process new knowledge

On a larger theatre, curriculum implementers would have to take the following into consideration:

1. The format of in-service workshops will have to be rethought to support teacher change.
2. Training for lower secondary history teachers should take priority as they set the stage for students ability to do historical interpretation and enquiry which would impact on their learning as they move up to upper secondary and take social studies and history.
3. There is also the implication for curriculum review and planning whereby the teaching objectives should be discipline rather than content determined.
4. Tied to the former objective would be the lead time for implementation to allow teachers to be trained for pedagogy rather than examination skills.

Teacher change is thus a complex enterprise. To ignore the teachers and teachers' knowledge bases specifically subject matter knowledge, if it is subject, related would be detrimental to any attempts for real change.

Date	Topic	M	Lesson Summary
29/03/2005	Reintroduce layers frame to interpret source Concentrate on Layers I and 2 of layers of inference frame	1 2 3 4 5 6 7  8 9	<p>Discuss nature of history - interpretation, historians ask questions all the time, new evidence. Gave e.g. of Korea and Japan's dispute over territory</p> <p>Use layers of inference frame to help students interpret source - DHL advertisement</p> <p>Walked through first layer with students. Adapted scaffold so that 2 layers now expanded to 3 layers.</p> <p>First layer to put questions. Also told them to use different coloured pens for each layer.</p> <p>Issue: What message is DHL sending to the audience?</p> <p>Norm: questions will go through head quickly but to make them more conscious want to slow down process</p> <p>Remind them to ask 5 Ws and 1 H questions. Students: So students came out with questions like 'when was it published? what modes of transport does DHL use? what is their motto? why is the background so blurred? how many employees do they have? where do they deliver to? For the question of "why is the background so blurred?" He told them that this suggests that the van is seen to be fast.</p> <p>Gave them time to do inference. Asked them for answers and commented on the need to find support for the inferences from the source</p> <p>Gave them Malaysian Airlines (MAS) advert to do as homework</p>

**Stage 1**

31/03/2005	<p>Frame to interpret Source</p> <p>Intro Great Depression</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p>	<p>Went through work of 2 pairs of students on MAS advert source interpretation with class</p> <p>Those that cannot be answered to be parked outside the frame temporarily</p> <p>Students to write conclusion in not more than 50 words based on questions and answers from first 2 layers.</p> <p>Remind them to base conclusion on evidence from source. That's why ability to draw out content important.</p> <p>Made relationship between adverts and history.</p> <p>New topic - Great Depression (GD) – Causes of GD - drawing on board to help students see the connection</p> <p>Gave them 4 sources on effects of Great Depression to do as homework</p>
5/4/2005	<p>Use frame to find out effects of GD</p> <p>Homework – 4 Sources - comprehend and infer</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p>	<p>Students shared their questions and inference of effects of GD.</p> <p>Asked whether they think they have extracted all relevant info.</p> <p>Reminded them purpose of first layer again. If more content drawn out then inferences would be more powerful</p> <p>Used CSI as e.g. If see pool of blood if questions asked superficial then inference would be superficial.</p> <p>If set of questions did not draw out evidence from source and instead asked questions which can't be drawn from source then will have problem solving case. Need to ask basic questions first.</p> <p>Historian very powerful. Can write false history of S'pore and someone may read it and think it's true</p>

Table 1

M = Move



Date	Topic	M Lesson Summary
8/4/2005	Introduced layers 4 & 5 of frame	<p>1 Teacher repeated that students have to first obtain info and infer from sources to reinforce why the questions asked at level one showed PowerPoint to students to draw out content is important</p> <p>2 However, one source not sufficient to come to proper conclusion. Need to go through more sources. Today we will look at levels 4 and 5. What doesn't the source tell me? What other questions do I need to ask?</p> <p>3 Referred to students' earlier parked questions. Referred to MAS advert to complete the layers. Reminded students of their parked questions. Student: When is this service going to start? What is the cost of 1st/business class?</p> <p>4 Teacher said not going to be able to find answer from source so asked student where. S: Internet. T: So if know more about advert what does it make you? S: Informed customer</p> <p>5 Students then worked in pairs. Shared questions with class.</p> <p>6 Summarised lesson and made connection of skills to history and how these skills of history is actually transferred to everyday life.</p> <p>7 Entire frame is enquiry through interpretation of sources</p> <p>8 If you're curious enough, then will move from narrow perspective to wider view of world.</p>

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**Stage 2**

12/4/2005	Causes of WWI	<p>1 Showed video: "Shot that Started the Great War. Used this as source.</p> <p>2 Issue: What are the causes to assassinate Franz Ferdinand? Why did FF want to go to Serbia?of WWI?</p> <p>3 T: Ask questions for layer 1. Then put questions on board where he'd drawn the layers.</p> <p>4 Ss: Which countries involved? Who triggered the war? Who was leader of Germany? When did events happen? Which countries started war? Who were the Blackhands? When war started? When video made? Why do they want</p> <p>5 S: If ask so many questions many can't be answered</p> <p>6 T: So can they be answered?</p> <p>7 T: Let's make inference now.</p> <p>8 S: weapons - so lots of money; FF loves hunting - cruel, sadistic</p> <p>9 T pointed out that when interpret source need to understand people in their time and place, empathise and not from their own present values and understanding</p> <p>10 T: think about power of asking questions. Therefore history is not about memorising. It's about learning new things. If you ask questions.</p> <p>11 Teacher then went on to layers 4 and 5.</p> <p>12 S: What other videos/documentaries can I look at? T: think outside video</p> <p>13 S: what other sources?</p>
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**Stage 2**

14/04/2005	Causes of WWI	<p>1 Continued with video.</p> <p>2 T: Are you more aware of causes of WWI?</p> <p>3 Teacher showed map and countries involved in WWI.</p> <p>4 Showed 2 questions asked in previous lesson</p> <p>5 Said video is extended piece of evidence - biographical approach to FF, overview approach</p> <p>6 Inferences only accurate if content is fully utilised. Inferences also only correct if we put ourselves in the shoes of those people of the time</p> <p>7 Teacher then went over their answers from previous lesson and asked them to write conclusion using writing frame given to them. Showed them an e.g.</p> <p>8 Reminded them of 2nd question: Is the video reliable as evidence?</p> <p>9 Questions which were asked in last 2 layers: Layer 4: What doesn't the source tell you? S: Year of Production? Target audience? Who produced video? Location of production? Other leaders in Europe? Layer 5: What other questions do I need to ask? S: When was it made? Who produced video? What about the stories of other leaders?</p>
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**Table 2**

Stage 3

Appendix

Date	Topic	M Lesson Summary
19/04/2005	Events that led to WWII Structured Enquiry Approach	<ol style="list-style-type: none"> <li>1 Recap last lesson.</li> <li>2 Time line from WWI to start of WWII so that students can see the link. Talked about European and Pacific timeline. Made link of WWI to S'pore.</li> <li>3 PowerPoint lesson - showed objectives, summarised road to war in Europe, showed video road to Pacific War to bridge students knowledge between European and Pacific War</li> <li>4 Teacher then asked students to read textbook. Then led them to ask questions to focus their enquiry Questions: What did Japanese want? What were the external circumstances? Who was in charge? What was Japan doing in the 1930s?</li> <li>5 Teacher then divided class into groups and gave them 11 sources each. They need to ask content question first, decide which sources are relevant and discard those that are not. Asked them each to choose 2 or 3 to look at and then pass to rest of friends in a round robin exchange of sources</li> </ol>

### Stage 3

21/04/2005	Structured enquiry approach – events that led to WWII	<ol style="list-style-type: none"><li>1 Gave instructions: Groups of 4 - 5. Everyone to look at one source at a time Need to activate thinking questions to generate questions to get content and make inferences. Remind them to keep issue in mind. No frames given. Students should know what questions to ask by now.</li><li>2 Students still ask how many questions they need to ask per source. Some groups divided sources up against instructions. Students forgot about the issue and asked a lot of irrelevant questions</li><li>3 Teacher walked around to check groups. Commented on some of their source interpretation</li><li>4 Concluded lesson by giving verbal instructions: Step 1: find out as much info as possible - remind them about issue Step 2: to classify sources into econ, political and social Step 3: evaluate reliability and impact Step 4: 250 word conclusion base on final 6 sources chosen Will write their own history about why Japanese went into Asia-Pacific War</li></ol>
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**Stage 3**

22/04/2005	Structured Enquiry approach - events that led to WWII	<p>1 Clarified with students why they are doing source exercise T: What is the main reason? Why are we doing exercise - 11 sources, a mini research, a mini enquiry? S: To understand our past. T: But what is the specific objective? S: To do an investigation T: What else? Think about the issue and think about write up you have to do. Trying to write a piece of work like historian, go through investigation, piece together a puzzle and if done well people will understand because investigate using evidence. Only something is missing. S: Don't need to find sources T: true historian will have to look for sources and went through with students where sources can be found</p> <p>2 Went through steps they have to follow again Step 1: Study sources and ask questions Step 2: Classify sources into economic, social and political. Told them to change reliability to relevance Step 3: If source is not relevant - students to eliminate it.</p> <p>3 Students in groups started doing investigation again.</p> <p>4 Teacher concluded by reminding them that they have to hand in write-up next Tues. told them exercise is limited because he only gave them 11 sources to look at. In reality, 1000s of sources.</p> <p>5 Reminded them that he's doing enquiry approach and that he didn't content teach, said that they do their own search by asking al lot of questions.</p>
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**Table 3**

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