IMPLEMENTING A THINKING SKILLS INTERVENTION IN ENGLISH CLASSES IN CHINA

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Abstract
This paper is concerned with the impact of implementing a thinking skills intervention on pedagogy and the classroom environment. General problems in implementing thinking skills in China and their suggested solutions are conducted by a small-scale investigation into a thinking skills class in Year 7 English in England. Discussion is based on existing research in this field and the writer's professional experience. Data is compiled from a teacher interview, a student questionnaire, and a video recording of the sample lesson.

Key words
Thinking skills, general problems, suggested solutions

1 Introduction
No one doubts the urgency of teaching thinking in the educational system. This is partly because of the fast-changing world and partly because of recent developments in cognitive psychology. As John Nisbett 1991 34 said by the beginning of the twenty-first century no curriculum will be regarded as acceptable unless it can be shown to make a contribution to the teaching of thinking.

Therefore, this is not an argument or the possibility of teaching and learning thinking. Rather the aim in this paper is to critically examine the impact of implementing a thinking skills intervention in China on pedagogy and the classroom environment by doing an investigation into a thinking skills classroom in Year 7 English at Heaton Manor School, Newcastle upon Tyne, England. Where “thinking skills” is mentioned in this paper it is employed as a general term instead of referring to any specific skills. As researchers in Thinking Skills Research Centre in Newcastle University note, thinking skills is an umbrella term for a range of intellectual powers, including logic, critical thinking, problem solving and philosophical inquiry.

http://www.ncl.ac.uk/bclc/research/education/src/

The argument draws on the existing research in this field and the writer’s professional experience in China. Data is collected by recording one of the thinking skills lessons in the investigated class. This is further supported with information collected in a teacher interview and from a student questionnaire.

2 Research literature on effective teaching and learning of thinking skills
“Advances in theories of thinking and learning together with a number of practical experiments suggest that thinking can be taught.” Perkins 1987 62. Therefore, as noted above, the argument now is not whether thinking can be taught but how it might be taught in an effective way. This section then views the models of learning underpinning thinking skills approaches and the arguments between them.

2.1 Models of learning underpin thinking skills approaches
“The constructivist theory of learning argues that learners create their own frameworks of interpretation in a search for meaning and understanding.” Nisbett 1991 27. In other words, learners must make their own
construction of knowledge to make sure that it is to be retained and readily retrieved when needed. Constructivist views of learning are profoundly influenced by the ideas of Vygotsky and Piaget. They both emphasised activity as the basis for learning and for the development of thinking. Wood 1998 In this respect, constructivist theoretical frameworks are applied to underlie effective teaching and learning of thinking skills. When it comes to approaches towards achieving this aim, the main division seems to be whether thinking skills should be separated from or integrated into existing curricula.

2.2 Argument between effective approaches to teaching thinking

Each approach to teaching thinking has its own core theory to underpin it. Those who adopt a separate approach believe that teaching a single course is far simpler than attempting to revitalize the style of instruction throughout a curriculum and they also argue that academic courses are not the only occasions for thinking in students lives. Perkins 1987 However, the theory of knowledge concerning what constitutes knowledge is. What is its purpose? What is its structure? What are model cases? What arguments explain and evaluate the object lays a good foundation for the infusion approach.

Each approach has its merits and difficulties. Sternberg considers that separate approaches are less likely to be overpowerened by knowledge-based curriculum and hence become non-programs allow students to get a clear sense of just what the thinking skills are with less danger of their simply being mixed in with other learning processes and hence losing their identities and can be evaluated more easily outside of specific content areas. However, the main criticism of this approach is that thinking is an integral element in any teaching and should not be treated as an add-on element and that transfer from the context-free situation to other spheres of learning is limited. Nisbet 1991

For the infusion approach in terms of its advantages, Sternberg sums up as follows: 1) it do not require a wholly separate course which may not fit into school priorities 2) seem to run less risk of fostering inert knowledge about thinking skills — that is knowledge that is never applied outside the thinking skills classroom and 3) reinforce the thinking skills throughout the curriculum rather than conveying the message that thinking skills are something apart from other curriculum. 1987 254 However, there is another side to the argument. Coles and Robinson argue that this approach may neither offer children the chance to examine the nature of their own thinking nor enable them to forge links between different areas of knowledge and that a tension between teaching thinking and dealing with the subject matter inevitably arises since teachers are supposed to focus attention on their pupils' thinking whilst introducing the content of the subject.

No position on approach seems completely satisfactory so the debate is likely to continue. Perhaps it is better to admit that there is not an approach that is best for everybody or every place. In this respect, Sternberg then argues for a mixed model in which thinking skills are taught as a separate course at the same time that they are infused and reinforced throughout the entire curriculum. 1987 255 By means of combining the two effective approaches it is believed that teaching thinking programmes would act as a catalyst to influence the pedagogy and curriculum of the whole school and that curriculum would in turn provide subject matter for the discrete programmes. Coles Robinson 1991 18

3 Small scale investigation on a thinking skills classroom

In this section a small scale investigation on a thinking skills classroom is carried out to view the impact of thinking skills. It opens with a brief introduction to the context of the investigated class. The description of a sample thinking skills lesson in this class is then presented mainly focusing on the procedures of a thinking skills lesson. Based on the research literature in section two and the writer's professional experience in China the detailed discussion on its impact on pedagogy and the classroom environment is then conducted.

3.1 Context of the investigated class

The class on which this investigation focuses is a Year 7 group aged 11 to 12 years old in Heaton Manor School which is one of the largest schools in the North of England situated on the east side of Newcastle Upon Tyne. The school has been carrying out research into the infusion of Thinking Skills in
English History and Geography for about six years whilst it is also trying to develop the use of Thinking Skills in other areas of the curriculum.

There are 31 students; 16 boys and 15 girls in the class. Their English teacher is a member of the Thinking Skills research group. They have now been involved with thinking skills activities for about three months. According to the teacher in the interview students in the class are very good at discussion based on the thinking skills activities and are more than willing to listen to others and explore their views.

3.2 A sample thinking skills lesson

To investigate how the teacher teaches thinking skills in her class and its impact on pedagogy and the classroom environment the writer sat in one of the classes thinking skills lessons and took a recording of it. An English lesson was selected as a sample because the writer was a language teacher.

The students were supposed to learn some vocabulary for a novel in this lesson. There were eight tables in the classroom and three to four students sitting around each table were grouped as a team. Their English teacher favours the infusion approach to teaching thinking in her class and infused thinking skills in this lesson by means of the Taboo strategy. It was to be used to reinforce the vocabulary to do with writing a novel and to get the students to think of alternative vocabulary before they began to write the definition of a word without using taboo words or parts of those words.

Launching

In that time the class had been involved in several thinking skills activities but it was the first time that they had worked on the Taboo strategy. Therefore the teacher began the thinking skills lesson by introducing what Taboo was. To make sure that her students had already caught the point the teacher then took “pizza” for example and required them to describe it without using words on the blackboard which were proscribed as taboo words.

Instructions

Knowing clearly what Taboo was each group was given a card on which there was a key word and some taboo words and a laminate on which they were supposed to write down a definition of their key word without using the taboo words or parts of those words. Then each definition would be read out to the rest of the class and each group would have to guess the word and write it down. A team would gain points for the answers that they guessed correctly and be awarded as well if other teams had worked out the correct word based on their definition.

Managing the activity

Consequently each group got down to discussion actively and collaborated on the definition of the key word. Meanwhile the teacher walked around the class and observed group interactions or eavesdropped on thinking ready for immediate cries for help and getting information for debriefing. Noticeably she did not check their answers immediately but asked the students what they needed to look for when they were listening to others. They responded to her question actively key words clues and looking for connections. Confirming that the students were already clear about their task she then asked the group one by one to read out their definitions. It was perceived that the students had been willing to listen to others carefully and felt confident to explore their views whether they could guess the answer correctly or not.

Debriefing

At the end of the Taboo activity the teacher debriefed the thinking skills lesson by asking her students such questions as “what is the purpose of the activity” and “what have you learnt from it” Many volunteers responded positively for example A word can be described with other alternative words I learned to think more before I wrote down the definition I experienced a different way of learning vocabulary and I developed my talking.

3.3 Discussion on its impact on pedagogy and the classroom environment

Based on the sample thinking skills lesson and the information from the teacher interview and the
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student questionnaire the impact of thinking skills intervention on both pedagogy and the classroom environment is discussed in this part. Subsequently the implication of adopting the teaching for thinking skills for the secondary English education in China will be explored.

Impact on pedagogy

In terms of pedagogy in this paper it is mainly concerned with teachers' professional development. Obviously there is no success in a thinking skills intervention without adequate professional development. A number of effects on teachers' professional development will be elaborated from the three stages of the sample thinking skills lesson: launching activity and debriefing.

Launching

Clear instructions and the modelling of the activity are crucial components in this stage and a thinking skills lesson may not go forward smoothly without them. It was noticeable that the teacher had conducted the two tasks in this stage of launching successfully since no puzzled facial expression was found among the students and they performed the activity in the way that she expected. As noted above in modelling she explained how the Taboo activity in the thinking skills lesson was conducted by demonstrating with a concrete familiar word “pizza”. The modelling activity functioning as scaffolding did help the students to understand what they were supposed to do.

Modelling is much more than giving simple procedural instructions. To model effectively the teacher as John Nisbet noted must be aware of her own thinking processes so that the children can see how she responds emotionally and intellectually to the task how she sets about establishing a suitable working procedure how she marshals information and searches her memory for relevant points how she copes with distractions the stress of time limits and so on. In this respect teachers are supposed to cultivate their own thinking processes in the first place. It could be achieved by “knowledge for practice” a conception of professional development proposed by Cochran-Smith and Lytle which means that teachers should use knowledge and theory provided by university-based researchers to improve their practice. Freedman 2001.

Activity

Questioning and discussion are effective techniques to involve in this stage. In terms of the skill of questioning it requires teachers to learn what questions to ask that can make children think and make their thinking explicit. Richard Paul an American authority on critical thinking recommends that questions such as “Why do you say that?” “Can you explain?” “Are there arguments against?” may achieve the aim mentioned above. Nisbet 1991. It was noticed that such kinds of questions were asked regularly by the teacher in the sample lesson. When asked “what are the necessary conditions for the successful implementation of a thinking skills intervention?” in the interview she emphasized the importance of fostering a climate of openness in the classroom for discussion. It requires teachers not to instruct authoritatively on what is right or wrong but to bring ideas into the open. Take the sample lesson for example. When many teams guessed the word “character” correctly the teacher did not say “yes” simply but proposed a question like “why do you think it is the definition of character?” for the team providing “twister” instead of “character” “Can you explain that” asked to let them justify their ideas. In this way the students are encouraged to think and present their opinions confidently.

Generally questioning and discussion go hand in hand in the stage of activity in teaching thinking. As a teacher to foster a climate for discussion he or she has to develop the skill of questioning in the first place. In other words their skills of questioning can be accelerated by conducting a thinking skills lesson.

Debriefing

A thinking skills lesson may not be accepted as a success without debriefing. Teachers can assess whether they have succeeded in improving their students thinking through it. Marie explored such main questions for the debriefing as “what is the purpose behind the Taboo activity?” “what did you learn from the activity?” To react to the students comments intellectually the teacher by herself may have to examine the activity carefully especially the purpose required the students to achieve. Thus it leads the
teacher to make considerable effort to study both the teaching material and the activity intensively.

It is shown that thinking processes and skills of questioning have been accelerated through the three-stage model of a thinking skills lesson with regard to their own professional development.

Impact on the classroom environment

Apart from the impact of a thinking skills intervention on pedagogy, its impact on the classroom environment is very obvious. Active discussion between the teacher and her students and the cooperative learning among students are most impressive as reflected in the sample lesson and in the information from the student questionnaire.

It was perceived that active discussion occurred throughout the whole thinking skills lesson. The students were provided with adequate opportunities to assert themselves. It is thus different from the traditional lesson in which the teacher is directive and students are relatively passive showing low levels of engagement. Watson. 2000 Since the students are encouraged and provided with chances to think in a thinking skills lesson they look active instead of passive which does help them a lot to internalize knowledge at a meaningful level. A climate of equality and openness was fostered in the sample lesson.

In terms of cooperative learning, it is generally applied in the stage of activity in a thinking skills lesson. It was demonstrated in the sample lesson that by working in small groups each student got a chance to talk about his or her thoughts and this thus developed their awareness and control of their own thinking processes which is defined as “metacognition.” (ibid.) Meanwhile students learned to justify themselves and listen to others as well which will empower them to become independent in the future. Competition among teams is good for challenge and motivation and it gives the lesson pace. The team winning the championship clapped their hands excitedly to celebrate their success making the lesson fun for the students.

Evidence of its positive impact on the classroom environment can also be retrieved from the student feedback in the questionnaire. In an attempt to find out how the students perceive a thinking skills intervention as a way of helping them to learn a questionnaire see Appendix 2 was devised for individual student responses. 31 copies of the questionnaire were handed out to the class and all of them were collected back when completed. The result shows that 27 students like a thinking skills lesson four students neither like it nor dislike it and none dislikes it. This means that approximately 87 per cent of the students react favourably to thinking skills lessons and the main reasons given for liking them were found to be as follows:

1. It is fun and easier to learn in a group
2. Different ideas can be shared in a thinking skills lesson
3. Get more chances to think and talk
4. It is better to understand in a thinking skills lesson than to be told in a normal lesson

For 13 per cent of those who neither like nor dislike thinking skills lessons they simply stated “I do not mind doing them” or quite neutral words to that effect.

When the students were asked to circle skills that they think have been improved in thinking skills lessons see question 3 in Appendix 2 they most circled more than one skill provided in the questionnaire. The table below shows the number of all students mentioning each item.

<table>
<thead>
<tr>
<th>Skills improved in thinking skills lessons</th>
<th>Number of all students mentioning it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion</td>
<td>27</td>
</tr>
<tr>
<td>Listening to other people's ideas</td>
<td>19</td>
</tr>
<tr>
<td>Explaining my ideas</td>
<td>22</td>
</tr>
<tr>
<td>Decision making</td>
<td>23</td>
</tr>
</tbody>
</table>

The four choices provided in the questionnaire are widely accepted as most apparent effects in terms
of a thinking skills lesson. Numbers in the table indicate that all of them have been achieved in thinking skills lessons especially discussion with 27 students choosing it.

It is useful to be reminded of Vygotsky’s concept of “the zone of proximal development” which refers to a situation where a child cannot yet do something unaided but can do it with help of a teacher. To conclude the impact of a thinking skill intervention on pedagogy and the classroom environment well, conducted thinking skills classroom is such a ZPD where both students’ intellectual development and teachers’ professional development can be accelerated.

Implication of adapting the teaching for thinking skills in China

Though the focus of this investigation is on a thinking skills lesson in Britain, it is intended to place it in the teaching context in China since as noted above, the explosion of interest in the idea of teaching thinking is world wide and the necessity to do so has been recognized by the writer whose teaching experience was in a secondary school in China.

Take the English education in secondary schools in China for example. English as a compulsory subject in China is paid strong attention to in the secondary school so it is arranged every day throughout the week. After graduation from the secondary school, most of the students know the grammar well and their vocabulary is wide. However, they may find difficulty in performing even the most simple communicative tasks like greeting, introducing people or asking for information. It mainly results from the over emphasis on language structures. Fortunately, it has been recognized that educators should consider not only how students learn the grammatical system but also how they learn to communicate which was first proposed by Campbell and Wales in 1970. The communicative approach to language teaching and learning is now widely considered as an effective approach around the world. The main objective of communicative language teaching is to enable the learner to do and perform activities and tasks in the foreign language. In the 1990s, the communicative approaches were introduced to English teaching in China reflected in the revised syllabus in 1995 and its revised course book Senior English for China. People Education Press. Longman in which a balance between grammar and speaking is provided.

With the implementation of the communicative approach in English teaching, it has been proved that the students can be more active than before in the class since it offers them the opportunity of linking language learning to their daily life, their interests and their future communicative needs.

However, most English teachers neglect the fact that as Jean Piaget noted. The principal goal of education is to create men who are capable of doing new things not simply repeating what other generations have done. One possible result is that they transmit the knowledge in the textbook mechanically to their students without considering thinking skills at all. Consequently, most students in most circumstances fail to use what they learn in the book to communicate in their own contexts but simply repeat what they learn in the textbook. Very little thinking is involved in this process. Take vocabulary learning for instance. Many students fear it most because they seldom think carefully that it is possible to learn it with more ease in alternative ways to rote learning. If a teacher could introduce thinking strategies such as odd one out or the taboo activity into his or her vocabulary teaching, it might encourage the students to study vocabulary more thoughtfully and their thinking skills would be developed by means of doing so.

As Gilbert Ryle points out, “All lessons are lessons in thinking.” The communicative approach has to some extent improved English teaching and learning in the secondary schools in China. However, it is believed that more improvement can be achieved if the teaching of thinking skills can be introduced into the language classroom.

4 Problems in implementing thinking skills and their suggested solutions

Based on the discussion above, it is clear that thinking skills intervention has gained positive value in education. However, as a Chinese saying goes, “All things are difficult to begin.” Implementing thinking skills as an innovation and change will inevitably encounter difficulties. This section then views its general problems based on literature and the small scale investigation on the thinking skills class. Following each
problem [suggestion for improvements is proposed and justified with the help of the relevant literature and
drawing on the writer's teaching experience] Subsequently [some main specific problems and their
suggested solutions may be referred to regarding secondary English teaching in China]

4.1 General problems and suggested solutions

To implement a thinking skills intervention [many approaches can be employed to achieve it] some
of which have been referred to in Section two [it seems impossible to specify each one] problems in one
essay [therefore only some general problems are discussed in this part]

Time consuming

Teaching thinking is a time-consuming task [since apart from teaching the overcrowded knowledge
content of their subjects] teachers have to spend extra time in focusing on their students' thinking in the
class [Nisbet 1991] Besides the time inside the class [it takes teachers more time outside the class to
prepare for a thinking skills lesson] Take the sample thinking skills lesson for example [the teacher
needed to make cards used for the Taboo activity in the class and had to think through what the taboo
words would be] As the teacher said in the interview [she had to spend double more time on the
preparation for a thinking skills lesson than a normal lesson]

Where the problem arises [it is suggested that it be better to use an infusion approach than a separate
approach [since it does not require a wholly separate course] Sternberg 1987 [it relatively releases the
pressure of overcrowded syllabuses] but does not solve the problem basically] For instance [the infusion
approach was used in this sample lesson] but it was perceived that only eight words could be introduced in
the fifty-minute lesson and the teacher finished the lesson in a hurry at the end [In this respect] it is
suggested that discussion time could be saved if the students can discuss before class [in other words the
teacher can inform the students beforehand what they are supposed to do in the next lesson and they can
work in a group outside the class] Similarly [if teachers can work collaboratively as a team the burden
of preparation for a thinking skills lesson can be reduced] What is more a school system can dedicate more
time to teaching thinking by controlling the class size

Resistance from traditional attitude

Resistance from the traditional attitude that "students receive rather than give information and
thoughts" Fisher 1990 [x] results in another apparent problem in terms of implementing thinking skills
Some teachers especially those in an older generation resist the innovation and change not to say
learning to implement thinking skills in their teaching [They strongly believe that their original way is
effective [so why they should bother to change it] However they ignore the fact that skills that were
appropriate decades ago no longer work effectively in modern society] Teachers have to change their view
and thus change their teaching methodology to prepare their students for the changeable world When
asked in the interview whether all the teachers have adopted thinking skills for their teaching [it was
answered that not all teachers in her school are ready to implement thinking skills in their teaching]

To help these teachers change their attitude and let their students benefit from the teaching of
thinking skills as soon as possible [it requires expertise training in teaching thinking skills including
showing them a model thinking skills lesson] which may let them perceive the obvious difference from a
lesson without a thinking skills intervention [reasons for implementing thinking skills and procedures for
achieving it] At the same time workshops and seminars should be available for the sake of the
communication between teachers Sternberg 1987 [x]

4.2 Context in China

Apart from the general problems mentioned above China may have its own special difficulty if
adopting thinking skills for teaching The most apparent one is that most students are hesitant to express
their opinions in public even though they have been encouraged to do so [Though it has become better
because of the implementation of the communicative approach [it needs great efforts to reach a
satisfactory standard] As Watson 2000 [x] mentioned] maximum communication between teacher and
students is one of crucial elements in effective teaching and learning [Only by this process can thinking
skills develop]
Maybe it is very threatening for teachers who are used to being respected and powerful in the classroom to change such a strong attitude in a short time. However, it is possible to change it in the long term if teachers learn to be broadminded since it is noted above that discussion requires a climate of openness in the classroom. Gradually, students may feel comfortable to express their opinions in the class. A thinking skills lesson will thus go on smoothly with their involvement.

5 Conclusion

Undoubtedly, the implementation of a thinking skills intervention has justified its positive existence in education by its contributions to pedagogy and the classroom environment. By means of investigating a thinking skills classroom in Heaton Manor school, this essay focuses on how the teacher infuses thinking skills in her class and its impact on a teacher’s professional development and the classroom environment.

As a thinking skills intervention has proved its advantages in teaching, the implication of adopting it for the secondary English education in China is thus proposed and relevant general problems are referred to as well. It is hoped that useful suggestions for these problems have been provided based on literature and the writer’s teaching experience. It is also hoped that teachers themselves have perceived their important role in teaching thinking skills for the benefit of our youth.

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Appendix 1  A Teacher Interview

Research for Thinking Skills Course Interview

1 What approaches do you use in the lesson to develop thinking skills
   a discrete using the existing programs
   b infusion
2 How long have you been using them
3 How often do you use them
4 Do you feel that they have improved your effectiveness as a teacher
   Probe further
5 Do you feel that thinking skills approaches have improved the motivation of your students
   Probe further
6 What are the necessary conditions for the successful implementation of a thinking skills intervention
7 What are your students’ reactions
   a enjoyment
   b concentration
   c involvement in group discussion
   d making progress
   e any further comments
8 What are your desired effects by using these approaches
9 How do you assess whether you have succeeded in improving children’s thinking
   Do you have a set of evaluative criteria
10 Do your students develop the criteria with you
11 How do you think conducting thinking skills approaches in your class effect your professional development
12 What difficulty do you encounter when you infuse thinking skills in your teaching

Appendix 2  A Student Questionnaire

Research for Thinking Skills Course Questionnaire

I would like your help in evaluating thinking skills as a way of helping you to learn so please fill in the questionnaire.

1 Do you enjoy lessons infused thinking skills
   Please circle the statement that you most agree with
       I liked it
       I neither liked nor disliked it
       I did not like it
2 Could you give a reason or reasons for your answer to questions 1
3 What skills do you think have been improved in such lessons
   Please circle the one or ones that you most agree with
       Discussion
       Listening to other people’s ideas
       Explaining my ideas
       Decision making
4 What else do you think you have learnt from the thinking skills lessons
5 Can you feel the difference between lessons infused thinking skills approaches and those without them
   If there is what do you think is the most obvious difference
6 Do you have any problems in having a thinking skills class
   If there is what are your main problems

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