Developing critical thinking through Socratic Questioning: An Action Research Study

Husniah Sahamid
Universiti Malaysia Pahang (UMP), Pahang, Malaysia
Email: husniah@ump.edu.my

Received: 16-11-2015 Accepted: 28-07-2016 Published: 31-07-2016
doi:10.7575/aiac.ijels.v.4n.3p.62 URL: http://dx.doi.org/10.7575/aiac.ijels.v.4n.3p.62

Abstract
An action research study was conducted among 24 Form 4 level Malaysian students, aged 16. The duration of the study was five months and constituted 16 one-hour literature lessons (short stories from the secondary level Malaysian English Language Upper Secondary Level school syllabus). This paper describes my experience as a teacher-as-researcher to assist students to respond to teacher questions through Paul’s (1993) model of Socratic Questioning which claims to develop students’ critical thinking. Data was collected through researcher’s field notes, students’ writing tasks and student interviews which were analysed after each cycle of the action research study. Changes and adaptations were consequently made based on the data collected and upon teacher reflection to improve practice. The results of this study indicate that repeated practice of Socratic Questioning had a positive effect on student responses and writing tasks. Some of the factors affecting students’ performance included students’ language proficiency, weak reading ability and students’ anxiety towards the questioning method. These issues had to be addressed and dealt with, before Socratic Questioning could be properly implemented in the classroom.

Keywords: Socratic questioning, teacher questioning, critical thinking, action research

1. Introduction
The most frequent factors cited for unemployment of Malaysian graduates are lack of communication and critical thinking skills (Ambigapathy & Aniswal, 2005, Nurita, Ainon & Shahrudin, 2007). The rapid advancement of information and technology has brought with it new demands and challenges, so much so, possessing and exercising these skills is a necessity at the workplace. These changes which are occurring have directly affected teaching and teacher’s role (Paul, 1993). Standardised tests cannot be the sole measure of success of students anymore (Huitt, 1998). Students now need to be equipped with critical thinking skills to adapt to the new complexities and the demands of a challenging world. The classroom, as a place of learning, therefore, must also function as a place for the preparation of students for the outside world.

The Ministry of Education, in the National Education Blueprint (2015-2025), highlighted the importance of critical thinking ability in the nation’s education agenda for the next decade. Both teachers and students should learn and practice how to think critically (Khojasteh & Smith, 2010). The teacher must ensure that the “classroom climate is open, stimulating, and supportive” so students may engage in critical thinking discussions or activities; students may not take the risk to engage with critical thinking processes unless the environment is right. (Black, 2005, p. 4).

1.1 Socratic questioning to develop critical thinking
The characteristic of critical thinking is the ability to think logically and abstractly, and to reason theoretically (Paul, 1993; Paul and Elder, 2007). Socratic questioning is one of the most powerful methods to promote critical through dialogue from questioning between students and the teacher (Jones & Safrit, 1994; King, 1994; Paul 1993). A person who trains and disciplines his mind to think in a prescribed manner, consistently using the same set of procedures to guide that thinking, would be able to raise his standard of thinking. In the context of learning, this implies that students’ critical thinking can be developed if teachers have the skill to conduct questioning and to ask appropriate questions.

There is no written doctrine or manual as to how Socratic questioning could be specifically conducted, and there is no one ‘Socratic method’ in which one can strictly and systematically follow. There are different adaptations of Socratic questioning just as there are a number of ways to which it is referred (Paul, 1993). The Socratic questioning method is traditionally used with individuals, but has been adapted successfully for use in large groups as in regular classrooms or lecture halls (Holme, 1992). Tredway (2000) reports that at an Annual Conference in Washington D.C., twenty-five conferencees were trained in the Socratic dialogue and then instructed to read a text. Twenty students were instructed to read the same text. It was found that the students demonstrated intellectual and emotional insights that the conferencees, as adults, had overlooked. Students who were used to the practice of Socratic seminar were able to conduct a more thoughtful and insightful discussion than their adult counterparts. Studies on the use of the different variations of the Socratic method...
have, by and large, been rather positive. A study conducted on the Socratic seminar on a group of sixth and seventh graders (age 11 and 12) at a school in Chattanooga, Tennessee (Polite & Adams, 1996) yielded positive results. It was found that approximately 80% of the student-sample, were functioning at the level of formal operations, a level associated with critical thinking. In another study, three methods of instruction were employed and compared: the Socratic dialogue method, the traditional lecture, and personalised systems of instruction (PSI). The PSI was viewed more positively by students but the performance outcomes were shown to be higher for students who learned with the Socratic dialogue method (Smith, 1987).

Paul, currently the one of the most well-known advocate of critical thinking in schools, has set up the Centre for Critical Thinking at Sonoma State University to develop materials such as books and video-tapes, on how to foster critical thinking and Socratic questioning in the classroom. Paul (1999) has created a complete “system” in his attempt to bring the method into the classroom with a model of Socratic Questioning to develop critical thinking in students. Workshops and conferences are also conducted by the centre. A study investigating the effect of integrating Richard Paul’s model for critical thinking into a U.S. history course on community college students found students’ abilities to think critically improved in a single course (Reed, 1998). In a writing skills class, a study on 12th grade students incorporating Richard Paul’s “Elements and Standards of Reasoning” in Socratic Questioning found that students improved their critical thinking skills in their writing composition. Students improved dramatically in all key areas of writing, among all groups comprising high range, mid-range and low range achievers (Scanlan, 2006).

1.2 Critical Thinking and Paul’s model of Socratic Questioning (SQ)

Socratic questioning is linked closely to the concept of critical thinking since both share a common end (Paul & Elder, 2001). The goal of critical thinking is to establish a disciplined manner of thinking while Socratic questioning seeks to cultivate an inner voice which, through a model and strategy of questioning, discipline the mind (Paul & Elder, 2001). Asking the right questions is important since good thinking is derived from asking questions that stimulate thought. Critical thinking is developed through a system of process used to form and shape a person’s thinking, focusing on reasoning (Paul & Elder, 2001). Paul uses the word “system” and states that by working through an organised procedure; the mind can be disciplined and trained according to a standard.

Effective teacher questioning actually requires a well-developed system for questioning to develop critical thinking in students. Paul provides for this logic to reasoning and disciplining of the mind through a “structure” (Paul, 1993, p.114) that teachers can easily adopt in the classroom. The structure gives a clear procedure to discipline their minds into providing reasoned responses when questioned, and the ability to do so displays critical thinking. For this reason I chose to employ Paul’s model of Socratic Questioning (SQ) in my study. The Elements of Reasoning” (Figure 1) provides the structure needed when used with SQ.

The eight ‘Elements of Reasoning’ are: Purpose, Question, Assumptions, Inference, Implications, Point of View, Concepts and Information. These elements form the central focus of all reasoning, and are used to assess students’ thinking and writing. The questions from the Elements of Reasoning give direction and focus to thinking:

- Questions of Purpose force us to define our task.
- Questions of Information force us to look at the sources of information as well as the quality of the information.
- Questions of Interpretation force us to examine how we are organising or giving meaning to information and to consider alternative ways of giving meaning.
- Questions of Assumption force us to examine what we are taking for granted.
planned for the duration of five months, constituting 16 one-hour literature lessons (Table 1). Three writing tasks were...
assigned, and three interviews conducted during the study. Data such as students’ journals, Researchers’ field notes were also compiled according to the three cycles.

<table>
<thead>
<tr>
<th>CYCLE 1 (4 hours)</th>
<th>Lesson</th>
<th>Topic</th>
<th>Writing Tasks</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 1</td>
<td>Introduction to short story</td>
<td>Writing Task 1</td>
<td>Interview 1</td>
<td></td>
</tr>
<tr>
<td>Lesson 2-3</td>
<td>Short Story 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson 4</td>
<td>Socratic Questioning</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CYCLE 2 (6 hours)</th>
<th>Lesson</th>
<th>Topic</th>
<th>Writing Tasks</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 5</td>
<td>Short Story 2</td>
<td></td>
<td>Interview 2</td>
<td></td>
</tr>
<tr>
<td>Lesson 6-7</td>
<td>Reading activities, Socratic Questioning</td>
<td>Writing Task 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson 8</td>
<td>Short Story 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson 9-10</td>
<td>Reading activities, Socratic Questioning</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CYCLE 3 (6 hours)</th>
<th>Lesson</th>
<th>Topic</th>
<th>Writing Tasks</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 11</td>
<td>Short Story 4</td>
<td></td>
<td>Interview 3</td>
<td></td>
</tr>
<tr>
<td>Lesson 12-13</td>
<td>Reading activities, Questioning</td>
<td>Writing Task 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson 14</td>
<td>Short Story 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson 15-16</td>
<td>Reading activities, Socratic Questioning</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.4 Data Collection and analysis

This is an action research qualitative study. The short stories from the Literature Component (Upper secondary level English syllabus) was used as a subject base. Data comprised student writing tasks, student interviews, student journals, researcher’s field notes as well as factual based sources, such as student records and documents. The researcher’s field notes was one of the main sources of data in the study. In action research, this data is considered valuable as it has many advantages over other forms of data (Plantanida & Garman, 1999).

Data was collected from three participants (one for each proficiency level) for the student interviews and the assessment of the writing tasks for development of critical thinking. Students’ development was evaluated through three in-class writing tasks over the duration of study. A progressive analysis of students’ writing tasks through Paul’s rubric assessment (Grade Profile) was used for this purpose. The study looked for improved reasoning and analysis, using Paul’s model of SQ and the Elements of Reasoning in the duration of 16 weeks. Data analysis in this study was an on-going process at each cycle, and changes to the teaching strategy were made and implemented into the next cycle after data was collected, analysed and upon teacher reflection.

Student interviews were transcribed and read after which they were read and analysed separately. Analysis involved looking out for information given in their direct response to my questions, comparing them with responses from the other informants for differences and similarities, and also for general patterns and recurrent themes that emerged. The same was done for other sources of data (journals, field notes) to obtain a preliminary analysis of general themes and ideas. The different categories were then laid out and checked for a definite pattern that emerged consistently across the various sources of data. These were then examined for clustering of units. Analytic coding was employed to develop themes as categories and subtopics emerged. A comparison was done with the findings of the data sources to confirm the findings and to answer the research questions. Member checks were conducted to provide feedback on my interpretations of their responses, and to check for inconsistencies.

3.5 Assessment of critical thinking using Paul’s ‘Grade Profile’

Students’ development of critical thinking was assessed through the writing tasks assigned to them at each cycle of the study. This was to gain insight into their reasoning and quality of thinking rather than the quantity of the information (Nobori, 2011). Students’ assessment of students’ critical thinking was based on an adapted Grade Profile (Paul, 1993).
which assesses how well students reason under each of the eight Elements of Reasoning: Question or Issue, Purpose, Information, Concept, Implications, Assumptions, Inference and Conclusions. Paul provides the Grade Profile for assessment of critical thinking in different subject areas but teachers are encouraged to adapt them for their own classrooms to develop thinking standards in students according to their subject requirements.

Table 2. Grade Profile for the assessment of student’s Writing Tasks 1-3

<table>
<thead>
<tr>
<th>GRADE DESCRIPTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Grade of F:</td>
<td>Student does not display literary thinking skill and ability. Essay is vague, imprecise and unreasoned.</td>
</tr>
<tr>
<td>a pattern of uncritical thinking</td>
<td><em>Essay does not display any significant effort into thinking his/her way through the issues.</em></td>
</tr>
<tr>
<td>The Grade of D:</td>
<td>Student shows only a minimal level of little literary thinking skills or abilities.</td>
</tr>
<tr>
<td>minimal level of understanding and skill in critical thinking</td>
<td><em>Essay is poorly done. There is little evidence that the student is reasoning’ through the essay. Thinking lacks discipline and clarity.</em></td>
</tr>
<tr>
<td>The Grade of C:</td>
<td>Student shows the development of modest literary thinking skills or abilities.</td>
</tr>
<tr>
<td>some level of skill but highly inconsistent, with as many weaknesses as strengths</td>
<td><em>Essay is reasonably well done, however, some parts are mediocre. There are more than occasional lapses in reasoning.</em></td>
</tr>
<tr>
<td>The Grade of B:</td>
<td>Student shows demonstration of a range of specific literary thinking skills or abilities.</td>
</tr>
<tr>
<td>more strengths than weaknesses. It has some distinctive weaknesses though no major ones</td>
<td><em>Essay is, on the whole clear, precise and well-reasoned, with occasional lapses into weak reasoning.</em></td>
</tr>
<tr>
<td>The Grade of A:</td>
<td>Student shows a clear development of a range of specific literary thinking skills or abilities.</td>
</tr>
<tr>
<td>excellent overall, with no major weakness</td>
<td><em>Essay is, on the whole, clear, precise and well-reasoned.</em></td>
</tr>
</tbody>
</table>

(Adapted from Paul & Linda, (2001, pp. 175-177)

4. The Cycles of the study

4.1. Cycle 1

As the Socratic questioner and teacher, questions were prepared in accordance with the ‘Elements of Reasoning’; the questions are not necessarily sequential. I began by modeling the thinking I wanted students to do by thinking aloud to make students aware of the procedures involved in thinking. The role modeling exercise was necessarily slow and deliberate to demonstrate the thinking process. Later, they were guided to provide illustrations, examples, analogies and evidences to bring thinking to a ‘standard’ of reasoning through questions covering aspects of *Purpose, Information, Interpretation, Assumption, Implication, Point of view, Concepts and Question*. In addition to the main questions, probing or follow-up questions were prepared to assist students to provide illustrations, examples, analogies and evidences to give depth and breadth to their reasons. These were used to check for accuracy, clarity, depth, breadth, precision, relevance and fairness in their reasoning (Paul, 1999).

The majority of students either did not or could not respond to the questions posed. Through a show of hands, I found out that most students did not read or did not complete their assigned reading text. This was subsequently confirmed through the student journals, and cross-checked in the student interviews.

*I was taken aback. Many were unable to elaborate on their responses. Through a show of hands, I found out that most students did not read or complete their assigned reading text.*

Researcher’s field notes

There were other reasons for students not responding to the questions and attempted to understand the situation from the students’ perspective. Several MP and LP students, in particular, could not express their thoughts and did not respond to questions posed because they did “not have the sentences in English” due to a lack of proficiency. The following is an excerpt of the transcription of the interview with a LP student:
Researcher: You’re rather quiet [in class] …when I question you, you don’t respond much. Why is that?

Student: I don’t know.

Researcher: Do you understand my questions in class? (silence) When I ask the questions, do you understand?

Student: Faham tapi nak keluarkan tu, tak da ayat dalam Bahasa Inggeris. ([I] understand but I can’t express it, I don’t have [the] sentences in English)

In addition to this, students displayed anxiety towards the questioning strategy. Anxiety showed notably in the students’ journals. Clusters of words and phrases pointed to feelings of nervousness or fear. Out of the 24 journal entries 11 mentioned or alluded to feelings of ‘nervousness’ or ‘fear’. The following is a typical journal entry:

*I understand what did you taught me last week but teacher, don’t and never ask me any questions because I can’t speak English very well. But I can understand what did you say [sic] in the class.*

Students, especially the LP students, could not go beyond simple, single phrase responses and were unable to express their opinions. Socratic questioning was temporarily shelved, to address the immediate issue of students’ poor proficiency and poor reading ability.

### 4.2 Cycle 2

Based on what was discovered in Cycle 1 several measures were taken and implemented in Cycle 2. The following ‘actions’ and changes were made to the strategy:

1. New lesson plans incorporating different support reading activities were devised to assist students in their reading and understanding of the short stories. These included the use of graphic organisers, pictures, storyboards, jigsaw reading to help with the understanding of text.

2. Conduct of primarily low order questioning to check for a thorough understanding of content. Despite their anxiety I continued with questioning, to get students used to the idea of being routinely questioned in class.

3. Measures were put into place to address students’ anxiety towards Socratic questioning:
   
   i. Pair work discussions: Students were allowed to get help from their friends through pair work before responding to questions. This gave them time to practice their responses before responding to the teacher.
   
   ii. Increased wait time: Students were given more wait time after each question. They were also allowed time to write down their answers first before responding to my questions. In this way, they were able to formulate their responses properly and the stress of having to respond spontaneously was taken away.
   
   iii. Allowance for shorter responses: I did not press as much for elaboration in responding to the different questions under the Elements of Reasoning. My primary focus was on getting students to respond beyond their monosyllabic answers.

One of the problems was a lack of understanding of content of the assigned text. The less-skilled LP readers were generally less able to choose the appropriate strategy for the problem they face in reading (Walter 2002), and so they also had to be assisted to read and comprehend the texts assigned. Much has been talked about the importance of schemata in reading and comprehension. Barnett (1988) claims with reading in the second language, an important part of the process is the “schemata”: the reader’s pre-existing concepts about the world and about the text to be read. Having been mainly exposed to the language of textbooks, and language primarily scientific in nature, students were struggling with the literary style of the writer in their literature text.

*If only the teacher can make I understand literature more and I can explain the whole story to the class because if I can do that I means I have understand [sic] everything*

Student journal

Towards the end of Cycle 2 the data revealed that students were less anxious about giving the ‘wrong’ answers as they understood the texts better and became more familiar with questioning. SQ was re-introduced in the second week of Cycle 2 with simpler questions from aspects of the EOR (Information, Purpose, Question) to familiarise students with the strategy. This time, there was a notable absence of words or phrases associated with anxiety in students’ journals. They liked that they were given more time to respond and that they could work in pairs before responding. The reactions of three students were recorded in their journals as follows:

Student 1: *I liked it when there was work in a pair. Working in a pair was a great. I didn’t need to do it alone.*

Student 2: *You were asking us so many tough questions about the necklace story (but) you gave us a period of time to find out the answer and not asked us to answer spontaneously.*

Student 3: *I can answer the quiz very easy (sic) with the help of my partner Hamid, the question seems to be so easy.*
In my field notes too, I had noted on the quality of student responses that I was getting. In addition, I had developed a
familiarity towards Socratic questioning and was more aware as to which kinds of questions needed to be asked at
particular times. This contributed to students ease with being questioned. The HP and MP students were progressing
steadily and their responses were comparatively longer but still faced a dilemma with my LP students.

4.3 Cycle 3

In Cycle 3 I covered questions under all eight aspects of the EOR. In SQ the main idea is to elicit reasoned responses to
develop students’ critical thinking. The disciplined would then also be reflected in students’ writing tasks since they are
guided into the same manner of thinking when they write. In this cycle, the measures taken were comfortably in place
and SQ ran more smoothly. I observed the effect of the changes I had taken to my teaching strategy in Cycle 2.

The LP students were lagging behind; they were not able to respond as well as HP and MP students. Responses were slow
and stilted due to their lack of proficiency in the language. In an interview with an LP student:

*If only I can speak whatever I have in my mind out loud and it make sense.*

LP students’ responses were also affected by the lack of confidence to respond to questions:

- **Student:** Everybody is so afraid and all my friends say that too.
- **Researcher:** Why is that?
- **Student:** They still...they feel that what they answer might be wrong
- **Researcher:** But then when it is wrong what happens then?
- **Student:** They feel ashamed and stuff... (mumbles)

Being perceived as stupid by their peer is a large deterrent and consequently students would rather play safe then risk the
attempt (Irvin, 1998, p.49). Developmental factors affect adolescent students’ interest in academic tasks and one of these
is the fear of failure especially among peers (Irvin, 1998, p.49). At this stage of development especially, there is a strong
need to be liked and included (Hargreaves, Earl & Ryan, 1996). Taking these factors into consideration as well, more
measures were put in place to elicit reasoned responses.

1. **Improve teacher questioning technique**
   
   I used prompts, to rephrase questions, and broke up the main questions into simpler manageable questions when
   responses were not forthcoming, to assist students with reasoned responses.

2. **Focus on meaningful, reasoned responses**
   
   I paid more attention to LP students who were noticeably lagging behind. At this point, less than grammatically
   correct responses were accepted and the focus was on students’ reasoning and thinking. Students were systematically guided using the EOR.

4. Findings

4.1 Students’ reasoned responses and development of critical thinking

The study revealed students’ ability to provide reasoned responses and consequently there was a development of critical
thinking to a certain extent, at all levels of proficiency (Research Question 1 and 2). The development in students’ critical
thinking was assessed through students’ ability to provide reasoned responses in their writing tasks, over consistent verbal
classroom practice in SQ. Using the Grade Profile for assessment of critical thinking, overall, students were able to
provide better reasoned responses in their writing tasks under the aspects of the Elements of Reasoning. Students,
however, had difficulties providing reasoned response under the elements of Assumptions, Inference and Conclusion.

In Cycle 1 of the study students were not assessed for critical thinking since SQ was postponed due to problem of reading
and students anxiety towards SQ. In Cycle 2 of the study, Both the MP and LP students did not display any significant
effort in reasoning. The writing task did not answer the Question, they did not write to the Purpose; they re-told the story
instead of analyzing the story. The HP student showed more than occasional lapses in reasoning and could not provide
appropriate reasons under the aspect of Information (did not cite appropriately or sufficiently from the text), Assumptions
were not addressed and there was no clear link between the Conclusion and the points raised in the writing task.

In Cycle 3 of the study both the HP and MP student fared much better in reasoning and showed only slight lapses in
reasoning. The Conclusion while present, was weak. Students showed weakness in tying up the points raised in their
concluding paragraphs. The LP students only fared well in the aspect of Information and could cite the right evidences
from the text. Some concepts were used but not explained sufficiently; the reasons put forward for LP students’ Point of
View showed bias and was not substantiated. Conclusion was also weak.

The development and the pace of development of critical thinking for each proficiency level differed as shown in Table
3.
Table 3. Students’ development based on Writing Task 1-3 over the three Phases of study

<table>
<thead>
<tr>
<th>CYCLE/TASK</th>
<th>PROFICIENCY LEVEL / DESCRIPTION OF WRITING TASK ACCORDING TO ELEMENTS OF REASONING</th>
<th>GRADE PROFILE: ASSESSMENT OF CRITICAL THINKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYCLE 1 Writing Task 1</td>
<td>HP Completed the task. Language is clear, writing is organized.</td>
<td>Not given a grade</td>
</tr>
<tr>
<td></td>
<td>MP Completed the task; language is clear but writing is somewhat disorganized</td>
<td>Not given a grade</td>
</tr>
<tr>
<td></td>
<td>LP Did not complete reading text; did not attempt task.</td>
<td>Not given a grade</td>
</tr>
<tr>
<td>CYCLE 2 Writing Task 2</td>
<td>HP Answers the Question and writes to the Purpose. Traces Implications of character; clarifies Concepts. Discussion of different Points of view. Information provided is relevant but shows a lapse at the end. Assumptions not addressed. Conclusion is not relevant.</td>
<td>Grade C Essay is reasonably well done, however, some parts are mediocre. There are more than occasional lapses in reasoning</td>
</tr>
<tr>
<td></td>
<td>MP Does not answer the Question; Does not write to the Purpose. As a result, the whole written task is considered irrelevant.</td>
<td>Grade F Essay does not display any significant effort into thinking his/her way through the issues.</td>
</tr>
<tr>
<td></td>
<td>LP: Does not answer the Question Does not write to the Purpose. Written task is not relevant. Student merely re-tells the story, no analysis done.</td>
<td>Grade F Essay does not display any significant effort into thinking his/her way through the issues</td>
</tr>
<tr>
<td>CYCLE 3 Writing Task 3</td>
<td>HP: Answers the Question accurately and to the Purpose. Cites clear Information from text. Point of view clearly stated, and relevant. Clarifies Concepts used. No discussion of Assumptions. Absence of a clear Conclusion.</td>
<td>Grade B Essay is, on the whole clear, precise and well-reasoned, with occasional lapses into weak reasoning.</td>
</tr>
<tr>
<td></td>
<td>MP: Answers the Question correctly and to the Purpose. Cites clear and relevant Information from text. Clarification of Concepts present. Able to trace Implications Point of View is relevant to task. No discussion of Assumptions, Conclusion present but weak</td>
<td>Grade B Essay is, on the whole clear, precise and well-reasoned, with occasional lapses into weak reasoning.</td>
</tr>
<tr>
<td></td>
<td>LP: Relevant Information. Some explanation of Concepts used. Point of View shows bias in reasoning. Implications not mentioned. No discussion of Assumptions. Conclusion present but very weak.</td>
<td>Grade D Essay is poorly done. There is little evidence that the student is reasoning through the essay. Thinking lacks discipline and clarity</td>
</tr>
</tbody>
</table>

Source: Paul and Elder (2001, pp. 175-177)
Overall, MP students showed the best development (Grade F to grade B), compared to HP (Grade C to B) and LP (Grade F to D). The HP student improved from a grade C to B, The MP student from F to B, and the LP student from F to D. (Table 3). Table 4 briefly summarizes students’ development in critical thinking based on the Grade Profile over the three cycles of the study. There was a development in reasoning, and consequently critical thinking, for all the three different proficiency levels.

Table 4. Students’ development over the three phases of the study

<table>
<thead>
<tr>
<th>Proficiency Level</th>
<th>Cycle 1</th>
<th>Cycle 2</th>
<th>Cycle 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>No grade</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>Middle</td>
<td>No grade</td>
<td>F</td>
<td>B</td>
</tr>
<tr>
<td>Low</td>
<td>No grade</td>
<td>F</td>
<td>D</td>
</tr>
</tbody>
</table>

LP students, scored comparatively lower than their MP and HP counterparts, primarily due to their low language proficiency. LP students’ inability to respond to questions based on the text, stemmed from their genuine problems with reading and comprehension. LP and lower level MP students may be able to read and decode almost all the words but they did not understand what was going on in the story. Tovani (2000) calls this “fake reading” where the right sounds are made and each individual word pronounced correctly; meaning, however, is not achieved. Students were not able to make connections. As a result, they could not even recount the story. Alderson (1984) states the lack of reading competence in a foreign language may rather be a problem of the foreign language than a problem of reading. Before students become competent readers in the foreign language they need to reach a "threshold level of competence" (Alderson 1984, p: 19). By disciplining their minds to provide reasons for their statement using the EOR, it not only helped students to give reasoned responses when questioned orally, but also helped them to elaborate on their responses when doing their writing tasks which resulted in better production in their writing.

4.2 Actions taken to improve the teaching strategy

The actions taken to improve the teaching strategy incorporating the Elements of Reasoning in SQ were formulated based on the analysis and teacher reflection over the three cycles of the study as discussed (Research Question 3). In action research, the data collected after each cycle of the study is what drives the next action research cycle. The following describes the actions taken to improve the teaching strategy.

1. Assess students’ needs and weaknesses in reading

Most important was assisting students to read and comprehend literary texts through incorporating support reading activities in the lessons. My assumptions that all students were able to read and comprehend the prescribed short stories led to difficulties in conducting Socratic Questioning. Hence, I learnt that prior to engaging any teaching strategy, an investigation of students needs and weaknesses is crucial. Holme (1992, p.975) in conducting Socratic questioning in his Science lecture courses indicated that student preparation in the form of completing textbook reading assignment before lectures was vital for the success of Socratic Questioning. In Adler’s (1982) Paedia program too, students were given lectures on content before proceeding with Socratic seminar. The pre-requisites to Socratic questioning is a firm understanding of content (Adler, 1982; Holme, 1992; Overholser, 1992; Paul, 1993).

I learnt that as a teacher I have to be prepared to help students with the reading of literary texts, which is different from reading the usual comprehension passages they are more familiar with in their regular English language classes. Only when meaning is achieved can there be critical analysis and only then can Socratic questioning be conducted effectively. Students only managed to complete their reading texts and achieved meaning with the support reading activities conducted in class

2. Develop teacher questioning skills and technique

Next was the actions taken to improve students’ responses by improving my own questioning technique when conducting Socratic questioning. Various adaptations to Socratic questioning had to be made: constructing simpler questions, rephrasing and breaking up the main question into simpler questions - these changes had to be made to adapt to students’ capabilities at the spur of the moment

I also learnt that the teacher, as Questioner, must also develop skills of questioning to elicit appropriate responses especially from weaker LP students who suffer from low self-esteem. I had to learn how to question so that students did not feel intimidated by the way I was questioning them. The way a teacher listens to a question or comment communicates her attitude toward the students. Non-verbal gestures of encouragement such as looking at students when they are talking, nodding and checking for understanding by repeating students’ responses are only some examples. Consequently, the attitude of the teacher as Questioner plays a significant role in the success of Socratic Questioning (Paul, 1993). I had to strive to achieve at creating a warm supportive atmosphere in the classroom so as to provide students the appropriate environment to respond and experience success at responding critically to questioning.
Lastly, thinking needs diligent practice and consistency. Although thinking is as natural to humans as breathing, the mind needs to be trained and disciplined to think in a critical manner (Paul, 1990); I have to work consistently and diligently at students thinking if I am to develop critical thinking in my students. I found that it was actually hard work doing this consistently in class. In Cycle 1 my questions were stilted and I had to constantly look at the guidelines to make sure that I was covering the essentials, but by Phase 3 I became more familiar with the processes and this communicated with students and they in turn, became more comfortable with the questioning procedure.

5. Towards the improvement of practice

I learnt that as a teacher I have to be prepared to help students with the reading of literary texts, which is different from reading the usual comprehension passages they are more familiar with in their regular English language classes. Students only managed to complete their reading texts and achieved meaning with the support reading activities conducted in class. Only when meaning is achieved can there be critical analysis and only then can Socratic questioning be conducted effectively.

I felt encouraged and empowered by the improvement in students’ verbal and written work despite the fact that I was behind schedule. I continued my lessons at the same pace incorporating Socratic questioning. Many students still struggled with problems addressing the aspect of Assumption and Inference, and their written tasks often had weak Conclusions. This was to be my next task: to discover why these two elements posed problems and how I could help students to write effective conclusions.

In the end, I learnt more about myself in the process of doing action research; it became less about how students performed during Socratic questioning and more about what I needed to do with my students to become a better and more responsive teacher. By conducting action research, I was able to test out my assumptions and see the real problems my students were facing and then find a way to help them to become better learners.

References


Sedigheh A.Sardareh, Mohd Rashid Mohd Saad, Abdul Jalil Othman & Rosalam Che Me. (2014) ESL Teachers’ Questioning Technique in an Assessment for Learning Context: Promising or Problematic? *International Education Studies; Vol. 7, No. 9; 2014 ISSN 1913-9020 E-ISSN 1913-9039*

