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Instructional leadership enhanced creativity in smart classroom activities

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Abstract

This is a case study of four instructional leadership using, purposive sampling on the implementation of teaching and learning strategies in prewriting process. Qualitative data from multiple techniques and concerns of validity through six segments is applied and reliability is also determined. The findings are, first through prewriting activities evolved the ability of students’ discussions which promote critical and analytical thinking. Secondly, the efforts of instructional leadership convey that teaching does not only revolve around drilling methods or memorizing but is maneuvered towards activities of self centred learning. Third, model of a cyclic pattern in prewriting activities was developed. It shows that teaching and learning approach enhance creativity and critical thinking.

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Keywords: Instructional leadership, prewriting activities, teaching and learning strategy, creative and critical thinking, brain based learning theory, cyclic pattern model.

1. Introduction

Instructional leadership refers to a series of behaviours designed to affect classroom instruction. Andrews and Soder (1987) describe the effective instructional leader as a resource provider, instructional resource, communicator, and visibly present in the school. Instructional leadership, emphasizing the technical core of instruction, curriculum and assessment, provide direction and affects the day-to-day activities of teachers and students in the school. Teachers with instructional leadership have strong influences to the students involvement in teaching and learning process teaching and learning (T & L). Thus in this context of prewriting process, the process of T & L by the instructional leader will generate a creative and analytical classroom. Instructional leadership narrowly defined focuses on leadership functions directly related to teaching and learning (Murphy, 1988). In a broader view, instructional leadership also refers to all other functions that contribute to student learning, including managerial behaviours (Donmoyer & Wagstaff, 1990; Murphy, 1988).

The literature does not provide insight into how the principals’ senses of outcome expectancy in their schools are. However, it does suggest that teachers’ outcome expectancy may be affected by their perceptions of resources available to them to accomplish the task of teaching.

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In the situation of teaching writing instructional leaders should make students aware and invoke different learning experiences to them depending on the level of writing skills they have. Many students find writing ‘difficult, with personal presumptions and learning experiences hampering and exacerbating their learning process. A dynamic pedagogic orientation of the instructional leadership approach in teaching of writing skill is needed to overcome this perennial predicament amongst students. Prewriting as described by Emig (1971) suggested that recursive process utilizes the students’ past experiences to construct new meaning while integrating to formulate new understanding, contributing to effective learning.

With that obstacle, prewriting is the first stage of the writing process and it is also a time of discovery or unearthing ideas. Prewriting can condense swirling mists of thought into words on paper. There is no need to think about order or how to condense. The objectives are to produce as many ideas as possible. Activities that are involved in prewriting process are collecting ideas through reading, prewriting, brainstorming, mind mapping and listings (Raimes, 1983).

In this paper, researchers would look into teaching and learning strategies in prewriting process which are underpinned by brain based learning theory. The question arises as to how does prewriting process enhance student centred and thoughtful learning whilst brain based learning theory is underpinned by three basic pillars; relaxed alertness, active processing and orchestrated immersion (Caine & Caine 1994). Recursive writing process is thus related or interconnected with the brain because as the activities take place, the brain works actively and this reduces the adrenalin rush. This process leads to orchestrated immersion of prewriting process.

1.1 Background of the Study

Students were taught to speak, read and write through various approaches, methods and techniques in order to achieve proficiency in the language. Specifically, the main objective of writing is to enable students to write a composition during which they are guided through the process of writing, prewriting-planning, drafting, revising and editing. This is to ensure that students are given proper guidance when producing a good piece of writing. Ironically, writing is still the skill most students are least proficient in.

1.1.1 Statement of the problem

Although a sizable portion of time is given to develop writing skills yet students are unable to produce good pieces of essay writing. This problem becomes worse when there is no support by the instructional leadership to implement (T & L) process on how to teach student to prepare the draft before getting into the full writing phase. This is when very often we notice in our students’ composition that ideas are left out or ideas presented without being fully developed. It can be deduced that the method of writing strategies does not motivate the student and students are lacking the cognitive strategies of generating and developing ideas in the topic they chose to write on. Thus, they lack the skills to elaborate the points they are writing about, and they lack cognitive strategies to reflect what had been learnt. White and Arndt (1991) suggested questions will prompt to help stimulate thinking, to draw on experiences and to develop and shape ideas. As such students have the opportunity to openly express their ideas and thoughts and this keep them actively involved in the lessons. The Malaysian Ministry of Education (2002) reports, that teachers were rated at a low to medium level when conducting writing skills in the Malay language classrooms. This shows that the teaching and learning strategy during the writing process are at a low level among secondary school teachers being observed. Hence, this research is looking at smart teaching and learning strategy during Malay language writing skill classroom.

1.1.1.1 Research Questions

This study has been designed to address the following questions:

a) How does an instructional leadership develop a creative and critical thinking during prewriting teaching and learning process?

b) How does constructivist instructional leadership underpinned brain based learning theory evolve in the prewriting process
2. Review of the literature

Emig (1971) a writing theorist view writing as a way of expressing how and what we think and as an effective means of learning. Specifically, as a fundamental procedure in prewriting process is how writers collect information, process it in some manner and then present it to the reader. The process involved collecting of ideas through reading, selecting, evaluating, brainstorming, mind mapping and making decisions about the relevance and the irrelevance of the information to the topic. Hence, writing also involved learners putting words in meaningful context. Learners connect their past experiences and construct new meaning, integrating them to reformulate new understanding.

Much of the success in writing depends on what has occurred before the students begin writing. Raimes (1983) said that there are a number of ways of teaching writing. They stem from the basic assumptions that writing means writing a connected text and not just single sentences, that writers write for a purpose and having readers, and that the process of writing is a valuable learning tool for all of our students. Responding to students’ writing is very much a part of the process of teaching writing.

This learning process implemented by the instructional leadership had been empirically proven to be very effective in rising the students’ writing skills levels (Siti Hanim, 1998; Campbell, 1998; Mohd Amin, 1998; Healy & Martha, 1997; Curriculum Development Centre, 1989; Maimunah Samat, 1989; Raimes, 1983; Byrne, 1979; Emig, 1971; Arapoff, 1975).

Many instructional leadership use graphics to help students organize thinking. These are called mind mapping or thinking maps, webs, fishbone maps or graphic organizers, which have proved to be particularly effective at increasing students’ understanding and retention of information. Perhaps this is because these visual devices make it possible to see connections between aspects of the information that are not obvious in a linear form, such as outline or a narrative.

The structure of these frameworks resembles the structure used by the brain to organize information. Remember that the various aspects of a memory, or of a learned fact, are not stored in a single, specific location in the brain, but are stored in networks. Images are stored in the visual cortex, sounds in the auditory cortex and so forth this may be why visually mapping information has proved productive for enhancing students’ storage and retention of information: It mirrors the structure used by the brain. These organizers have a number of uses. They can be used during prewriting to help students brainstorm aspects of a topic they might include in their composition (Wolfe, 2001). Thus, prewriting is a process where there is a rich source of information for the writers, in addition to serving as vehicles for students’ reflection while refining their thinking.

From brain research, as Olsen (1995) points out that people have come to understand that the brain is a pattern-seeking device in search of meaning and that the brain is a pattern–seeking device in search of learning. Thus, the most usable and useful curriculum for classroom teachers would be one that is made clear for teachers and students about what concepts are to be learned and how those understandings would be used in the real world. So with prewriting process it had been shown that the brain works along the activities.

3. Methodology

Qualitative approaches are conducted through multisource techniques: interview, non participant observations and documents which includes vignettes and concept map. Respondent from purposive sampling are chosen from Malaysian Smart School Teachers who teaches a Form Four Classroom (upper secondary school in Malaysian Education System). According to Merriam (1998) six basic strategies are used to enhance internal validity such as, firstly, triangulation using multiple sources such as non participant observation, interviews and document analysis to confirm the emerging findings. Secondly, the strategy of “members check” are carried out by taking data and making tentative interpretations back to the respondents and getting them to recheck the transcripts to see whether they are plausible or not. This procedure has been carried out throughout this study. Thirdly, the research project was carried out for about nine months, a long period to ensure the respondents produce patterns in their practice of teaching. This process is to gather data in order to increase the validity of the findings. Apart from that through peer examination, researchers had asked expert opinion in order to find out about comments and suggestions on the findings as they emerged.

Researchers had built rapport with the participants of the study to the point where they were disclosing their teaching activities and practices. During data collection a number of techniques were taken to ensure the reliability of the study. These techniques are audit trail, triangulation and the researchers remaining neutral and unbiased.
The researchers carried out simultaneously the data collection and the analysis of the data because without the ongoing analysis the data can be unfocussed, repetitious and overwhelming. So data that had been analysed during data collection are both parsimonious and illuminating. Furthermore, managing the data using NVivo software (Bazeley, 2002) had resulted in the systematic analysis of the data. During the coding process, the instructional leadership had been labeled as Research Respondent 1 (RR1), and observation as obsv, interview as intv, document as doc, and teaching and learning as T & L. This procedure made the work systematic and easier to retrieve the data while teaching and learning process took place.

4. Results

Based on the findings of the study, several conclusions have been drawn. Data gathered from multi sources; interview, observation and documents were analysed.

The table below shows the examples of teaching and learning approaches utilised by the research respondents. The data were taken from a series of the smart learning and reading activity strategies in prewriting process. There was a marked difference in the frequencies of the reading activities carried out by the four Research Respondents (RR) through observations (obsv.) and interviews (intv.).

4.1 Question 1: How does instructional leadership develop creative and critical thinking during prewriting teaching and learning process? (The findings are synthesized in the table below)

Table 1. Documented Observations, Interviews, and Data Matrices in Prewriting Activities to develop and generate creative and critical thinking

<table>
<thead>
<tr>
<th>Data Type (Documented Data)</th>
<th>Data Type (Observation Data)</th>
<th>Data Type (Interview Data)</th>
<th>Enhancing student creative and critical thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>By the end of this lesson, the students are able to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Gain information from the reading sources (T&amp;L1, RR1)</td>
<td>Students are asked to read 11 newspaper clippings and discuss their findings (Obsd.1)</td>
<td>Articles read will provide additional ideas to be shared with peers. (PR1, Intv.1)</td>
<td>Students collect, choose, and analyse the gathered information while expanding their knowledge.</td>
</tr>
<tr>
<td>2. Increase their knowledge on the relevant issues being discussed from their reading ((T&amp;L2, PR2)</td>
<td>Students read, discuss, summarise and present their findings. Students compose the outline of the essay to be written (Obsd.2)</td>
<td>These articles are learning devices and students will glean relevant information from them. More readings will be needed from other sources. (Intv. 2)</td>
<td></td>
</tr>
<tr>
<td>3. Read on the issue of snatch-thefts from reference books (T&amp;L 3, RR3)</td>
<td>Students asked to read articles with accompanying pictures of snatch theft cases</td>
<td>The inference from dialogue in the story shows some connections to snatch theft cases highlighted by the media. (Intv. 3)</td>
<td>Provide extra information to support their views in discussions and writing. Student are able to connect the situation and do more thinking and reading</td>
</tr>
<tr>
<td>4. Read or refer to newspaper and magazines for information (T&amp;L4, RR4)</td>
<td>Students search for information on topics of Science and Technology products. (Obsd.4)</td>
<td>From their reading, the students knew the importance of Science and Technology products. (Intv.4)</td>
<td>Collect, choose and summarises information and these activities helps the student work on the task given</td>
</tr>
</tbody>
</table>

Table above shows the examples of teaching and learning (T&L) approaches and patterns utilised by the research respondents. The data was taken from a series of the smart learning and reading activity strategies in prewriting process. There is a marked difference in the frequencies of the reading activities carried out by the four Research Respondents (RR) through observations (obsv.) and interviews (intv.).
Table 1b: Documented, Observations, Interview and Mind-mapping Activities Matrices of Learning to enhance creative and critical thinking

<table>
<thead>
<tr>
<th>Data Type (Documented Data)</th>
<th>Data Type (Observation Data)</th>
<th>Data Type (Interview Data)</th>
<th>Mind-mapping Activities characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>By the end of this lesson, the students are able to write a good composition</td>
<td>RR1: Class, to conclude I'm (student) had drawn a picture of a family with a child holding hands to portray a happy family. A picture is worth a thousand words. So, we ask I’m why is it so? I’m: If a family is healthy, it shows that the family is happy.</td>
<td>Researcher: Could you explain the role of the mind map? RR1: when they look at the mind map, they can recollect things from their memories and form them into a mind map of their own. Then they’ll arrange and group their ideas accordingly. This mind map looks simple yet creative and it’ll assist them to write as well as have fun. The students’ ideas are presented clearly in these graphics. (T&amp;L 5)</td>
<td>Correct usage of information from the mind map can illustrate the actual capability of the students to synthesise information by presenting them into relevant graphics. These graphics are analogy which represents their understanding of the topic.</td>
</tr>
<tr>
<td>(RR1, Doc.5) By the end of this lesson, the students are able to list down relevant information</td>
<td>(T&amp;L 5)</td>
<td>RR2: carry on listing down your ideas...list it down according to specific categories in a graphic mind map as I had taught you.</td>
<td>Researcher: You had asked your students to present their ideas in graphics? RR2: I always encourage my students to use mind maps, but students like to choose simpler ways. Today they had chosen to use the linear points form. (Intv. 5)</td>
</tr>
<tr>
<td>(RR2, Doc2) By the end of this lesson, the students are able to list down relevant information</td>
<td>(Obsv. 2)</td>
<td>Student: Draw a mind map or in point form, sir?</td>
<td></td>
</tr>
<tr>
<td>RR3/Doc. T&amp;L 8 By the end of this lesson, the students are able to present and discuss the composition main points</td>
<td>(Obsv.8)</td>
<td>If that’s so, can you complete your mind maps sooner? Teacher draw a mind map using the 4W1H (Who, what, why, when and how) questions concept to guide the students to enable them to elaborate their points.</td>
<td>Researcher: This mind map is the basic guide in writing? RR4: I asked them to elaborate to answer the ‘how’ and ‘why’ questions, hence they had to think of how to do so. They still have to elaborate their ideas. These steps are necessary to train them to think properly so as not to veer off topic in their elaboration. (Intv.8)</td>
</tr>
<tr>
<td>RR4/Doc.Obsv.3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>RR4/Obsv.3</td>
<td></td>
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</tbody>
</table>

The data from both of the tables above show the mind mapping activities carried out by the research respondents which enabled the students to categorise the information in graphic form. It also shows that the students were able to synthesise these information by their abilities to transform them into graphics. These graphics are the analogical representation of their cognitive maturity. These tasks are the developing process in enhancing creative and critical thinking classroom.
4.1.1 Question 2: How does brain based learning theory evolve in prewriting process

These findings have been transformed into a model of cyclic pattern of smart teaching and learning strategy comprising prewriting process underpinned by brain based learning theory. *Cyclic pattern model* had been drawn from the prewriting process which occurs recursively, to and forth and not in linear process. The integration of brain based learning theory manifested during this prewriting process which involved collecting information, free-writing process, brainstorming, mind mapping and listing the ideas. Thus the three important pillars underpinning the study are active processing; relaxed alertness and orchestrated immersion do circulate along this prewriting process as shown in the model below.

![Figure 1: Cyclic Pattern Model](image)

5. Discussion

The activities to enhance the involvement of these students in constructing their own meaning on gathering information thus made the lesson meaningful. As Emig (1971) stated the recursive process of prewriting enable the writers to look to and forth the information thus needed the ability in refining the information. While Raimes (1983) noted that the prewriting is an important activity in gathering information, and this will certainly increase and improve the thinking process (Arapoff, 1975). Hence, these activities done by the instructional leadership during prewriting process are an important part in writing and it generates and develops thoughtful learning (Ministry of Education Malaysia’s Report, 2002). Murphy (1988) agreed that instructional leadership narrowly defined, focuses on leadership functions directly related to teaching and learning, which contributes to student engagement in learning, including managerial behaviours (Donmoyer&Wagstaff, 1990; Murphy, 1988).

In utilizing the creative and critical classroom, these non linear activities accumulate ideas from note taking to synthesizing of knowledge, providing a different level of thinking; understanding, knowledge, analyzing, synthesising and evaluating. The prewriting process (Raimes 1983), through recursive activities (Emig, 1971) accommodate and improved thinking process (Arapoff, 1975). Those activities accumulate the ideas and information of the writers through active processing in a relaxed situation as it goes recursively and creates an orchestrated learning, tying whole ideas together (Caine & Caine 1994).

6. Conclusion

Writing should be taught as a process of discovery rather than giving feedback after writing is done, which happens during the writing product approach. Teachers should intervene to guide students through the process so that they know which areas they should rework on. Other research also shows that feedback is more useful between drafts and not when it is complete at the end of the task. Apart from that, the prewriting involves the active processing of the brain, with a relaxed situation and immersed deeply around the topic being discussed.
As Aristotle supposedly said, “what we have to learn to do, we learn by doing.” Concrete experience is one of the best ways to make strong, long-lasting neural connections. These experiences engage more of the senses and use multiple pathways to store and therefore more ways to recall information.

References