UNIVERSITI PUTRA MALAYSIA

EFFECTS OF INFUSING SOCRATIC QUESTIONS IN MIND MAPS® ON THE DEVELOPMENT OF ESL STUDENTS' WRITING SKILLS

JASVIR KAUR K. AMAR SINGH

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By

JASVIR KAUR K. AMAR SINGH

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirement for the Degree of Doctor of Philosophy.

2013

To my supervisor and advisor

Dr. Shameem Rafik Galea

&

My mother

Madam Amar Kaur

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Abstract of thesis presented to the Senate of University Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy.

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JASVIR KAUR K. AMAR SINGH

July 2013

Chairman: **Assoc. Professor Shameem Rafik Galea, PhD**

Faculty: **Modern Languages and Communication**

In the early 80's the process writing approach replaced the previous product approach. Current research in Malaysia acknowledges the fact that the teaching of writing has evolved over the years but the Malaysian English as a Second Language (ESL) classroom has yet to completely adopt the process approach as the product approach is still the preferred approach. One of the reasons for this delay in the shift from product to process may be due to the fact that the education system emphasises heavily on examinations (Chandrasegaran, 1991; Kaur, J, 2004; Chow, 2007; Kaur, T. & Rajalingam, 2012). Teaching writing using the process approach must be made functional in the Malaysian ESL writing classroom because writing involves the process of clarifying ideas and making thoughts visible. There is thus a need to further include the teaching of thinking skills within the writing curriculum because the writing process requires the knowledge on an extensive range of linguistic and cognitive strategies (Emig; 1983; Rugguiero, 1995; Ritchhart, 2002; Chow; 2007; Lucini, 2010) which invokes higher cognitive functions of the mind.

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Thinking and planning for writing tools can fulfil in many folds the requirements of the education system, teachers' need to produce results and learners' independence and authentic voice. Thinking tools like Mind maps® introduced by Tony Buzan in 1971 and Socratic Questioning techniques can be built into the process writing instruction at the pre-writing and revising stages through brainstorming and conferencing sessions by both the teacher and students. There is an increasing number of research which applies Mind maps® in the planning and pre-writing stage in the teaching of writing skills. However, at present there is no research in Malaysia on the application of Mind Maps® and Socratic questions as a writing tool in scaffolding the development of ESL students' writing skills. This study therefore aims to investigate the effects of infusing Socratic questions in Mind maps® (Socratic Maps©) as a pre-writing tool in scaffolding the development of ESL students' writing skills.

This study which involves 4 groups of 200 upper secondary students from 2 different schools was conducted to determine the effects of Socratic Maps© in scaffolding the process writing approach in developing ESL students' writing skills. The experimental classes comprised of 50 students from each school. The teachers from the experimental groups had initially attended a 5 day course on the application of Socratic Maps© in the teaching of writing. These teachers were further given personal training and hands-on practices on the application of Socratic Maps© and Socratic questions within the process writing framework.

Writing lessons were then taught based on the process writing framework where the teachers in the experimental groups were provided with lesson plans and Socratic Map© templates. The intervention period was for 1 semester, approximately 98 days

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of face-to-face interaction. Writing lessons were carried out every day for 2 hours where students were taught writing skills based on the process writing framework. Socratic Mapping templates and Socratic questions were used as pre-writing tools in scaffolding the writing activities during brainstorming and conferencing sessions. The scaffolding processes were developmental and carried out in stages in order to provide students with enough practice to master the skills of mind mapping and in applying Socratic questions during brainstorming and conferencing sessions in groups and with peers.

The scoring of the essays was done using the Six-Trait Analytic Writing Rubric which consisted of ideas, organization, word choice, sentence fluency and conventions. The Six-Trait Analytic Writing Rubric is similar to the rubrics used by the Malaysian Examination Syndicate to assess English essay questions for public examinations. The scores were analysed using Paired Samples t-test and MANOVA. The results show that there is a significant improvement in the essays of the students in post-test 1 and post-test 2 compared to those in pre-test. There is also improvement in the length of the essays and an increase in students' vocabulary. Both the experimental and control groups from both the schools showed an improvement over the semester. However, the experimental group showed a higher and consistent improvement in terms of quality, students' independence and motivation which is highly likely to be attributed to Socratic Maps© and Socratic questions in scaffolding the writing processes within the process writing approach. The results of the delayed post-tests means adjusted by pre-tests using MANOVA showed that there was a significant difference between the two groups, favouring the treatment groups from both the schools.

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KESAN PENERAPAN SOALAN SOCRATIK DALAM PETA MINDA® TERHADAP PEMBANGUNAN KEMAHIRAN MENULIS PELAJAR ESL

oleh

JASVIR KAUR K. AMAR SINGH

Julai 2013

Pengerusi: Profesor Madya Shameem Rafik Galea, Ph.D

Fakulti: Bahasa Moden dan Komunikasi

Dalam awal tahun 1980-an, pendekatan penulisan berasaskan produk telah digantikan dengan pendekatan penulisan berasaskan proses. Hasil kajian semasa di Malaysia mendapati Pengajaran Penulisan telah berkembang tetapi bilik darjah di Malaysia masih menggunakan pendekatan penulisan berasaskan produk. Salah satu sebab kelambatan menggunakan pendekatan penulisan berasaskan proses ialah kerana sistem pendidikan di Malaysia masih menekankan peperiksaan (Kaur, J, 2004; Chow, 2007; Chandrasegaran, 1991). Oleh itu, pengajaran penulisan berasaskan pendekatan proses mestilah berfungsi dalam kelas penulisan Pengajaran Bahasa Inggeris sebagai bahasa Kedua kerana menulis melibatkan proses penjelasan idea dan membuat idea dilihat dengan jelas. Atas sebab inilah, pengajaran berasaskan kemahiran berfikir perlu diterapkan dalam kurikulum penulisan kerana proses menulis memerlukan pengetahuan yang luas dalam strategi linguistik dan kognitif (Emig; 1983; Rugguiero, 1995; Ritchhart, 2002; Chow; 2007; Lucini, 2010) yang mencetuskan fungsi kognitif dalam otak.

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Pemikiran dan perancangan untuk peralatan menulis dapat memenuhi kehendak yang pelbagai dalam sistem pendidikan kita termasuk keperluan guru untuk menghasilkan keputusan cemerlang dan kebebasan pelajar serta suara sahih. Peralatan memikir seperti Mind maps® yang diperkenalkan oleh Tony Buzan pada tahun 1971 dan teknik menyoal Socratik boleh diserapkan dalam arahan penulisan berasaskan proses dalam tahap sebelum menulis dan ulangkaji melalui sessi mencetus minda dan persidangan oleh kedua-dua guru dan pelajar. Setakat ini, ada beberapa kajian dan jumlah ini sedang meningkat yang menggunakan Mind Maps® dalam tahap perancangan dan sebelum menulis dalam kemahiran menulis. Akan tetapi, sehingga setakat ini, tiada kajian di Malaysia yang menggunakan Mind maps® dan teknik menyoal Socratik sebagai satu peralatan menulis dalam menyokong pembangunan kemahiran menulis pelajar Bahasa Inggeris sebagai bahasa kedua. Kajian ini bertujuan untuk menyelidik kesan menggunakan kedua-dua teknik menyoal Socratik dalam Mind Maps® (Sokratik Maps©) sebagai satu peralatan dalam tahap sebelum menulis untuk menyokong pembangunan kemahiran menulis pelajar Bahasa Inggeris sebagai bahasa kedua.

Kajian ini melibatkan 4 kumpulan 200 pelajar sekolah menengah dari dua buah sekolah untuk menentukan kesan Sokratik Maps© dalam menyokong pendekatan penulisan berasaskan proses untuk pembangunan kemahiran menulis pelajar Bahasa Inggeris sebagai bahasa kedua. Kelas-kelas eksperimental merangkumi 50 pelajar dari setiap sekolah. Guru-guru dalam kelas-kelas eksperimental telah menghadiri satu kursus 5 hari tentang penggunaan Sokratik Maps© dalam pengajaran penulisan. Guru-guru ini kemudian telah diberikan latihan individu dan amali dalam penggunaan Sokratik Maps© dan soalan Socratik dalam rangka pendekatan penulisan berasaskan proses.

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Pengajaran penulisan akan diajar berdasarkan rangka pendekatan penulisan berasaskan proses dimana guru-guru dalam kelas-kelas eksperimental telah dibekalkan dengan pelan pengajaran dan template Sokratik Maps©. Jurang masa kajian adalah selama satu semester dengan lebih kurang 98 hari berinteraksi bersemuka. Pengajaran bertulis berlangsung selama 2 jam setiap hari dimana para pelajar diajar kemahiran menulis berdasarkan rangka pendekatan penulisan berasaskan proses. Template Peta Minda dan soalan Sokratik telah digunakan sebagai peralatan sebelum menulis dalam menyokong aktiviti menulis semasa sessi mencetus minda dan persidangan. Proses sokongan ini adalah membangun dan dilakukan dalam beberapa tahap untuk membekalkan para pelajar dengan latihan yang mencukupi untuk menguasai kemahiran peta minda dan menggunakan soalan Sokratik semasa sessi mencetus minda dan persidangan dalam kumpulan dan dengan rakan sebaya.

Karangan telah diperiksa dengan menggunakan Arahan Analisis Penulisan 6 Sifat yang merangkumi idea, susunan, pilihan perkataan, kefasihan ayat dan konvensyen penulisan. Arahan Analisis Penulisan 6 Sifat adalah sama dengan arahan pemeriksaan Lembaga Peperiksaan Malaysia untuk menilai jawapan soalan karangan dalam peperiksaan umum. Skor-skor para pelajar telah dianalisa menggunakan T-Test sampel berpasangan dan MANOVA. Keputusan menunjukkan kemajuan yang ketara dalam karangan para pelajar selepas ujian 1 dan ujian 2 berbanding dengan sebelum ujian saringan. Karangan yang dihasilkan juga lebih panjang dan perbendaharaan kata para pelajar juga semakin meningkat. Kedua-dua kumpulan eksperimental dan kawalan dari kedua-dua sekolah menunjukkan kemajuan sepanjang semester yang dikaji. Akan tetapi, kumpulan eksperimental menunjukkan kemajuan yang lebih tinggi dan konsisten dari segi kualiti, kebebasan pelajar dan

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motivasi. Ini boleh dikaitkan dengan Peta Sokratik© dan soalan Sokratik untuk menyokong proses-proses menulis dalam pendekatan penulisan berasaskan proses. Keputusan ujian selepas kajian yang dilengahkan dengan purata yang diselaraskan oleh ujian saringan menggunakan MANOVA menunjukkan ada perbezaan yang ketara diantara dua kumpulan tersebut, yang memihak kepada kumpulan eksperimental/kajian dari kedua-dua sekolah.

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I certify that an Examination Committee met on 30 July 2013 to conduct the final examination of Jasvir Kaur K. Amar Singh on her Doctor of Philosophy thesis entitled 'Effects Of Infusing Socratic Questions In Mind Maps® On The Development Of ESL Students' Writing Skills' in accordance with the Universities and University College Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

Members of the Examination Committee were as follows:

Rosli b Talif, PhD
Associate Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Chairman)

Ain Nadzimah bt Abdullah PhD
Associate Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Internal Examiner)

Jayakaran a/l A.P. Mukundan PhD
Professor
Faculty of Educational Studies
Universiti Putra Malaysia
(Internal Examiner)

Martin Cortazzi PhD
Professor
University of Warwick
United Kingdom
(External Examiner)

NORITAH OMAR, PhD
Associate Professor and Deputy Dean
School of Graduate StudieS
Universiti Putra Malaysia

Date: 19 September 2013

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Shameem Rafik Galea, PhD
Associate Professor
Director of Marketing and Communication
Universiti Putra Malaysia
(Chairman)

Shamala Paramasivam, PhD
Associate Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Member)

Bahaman Abu Samah, PhD
Associate Professor
Department of Professional Development and Continuing Education
Universiti Putra Malaysia
(Member)

BUJANG BIN KIM HUAT, PhD
Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

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DECLARATION

I declare that this thesis is my original work except from quotations and citations which have been duly acknowledged. I also declare that it has not previously, and is not concurrently, submitted for any other degree at University Putra Malaysia or any other institution.

JASVIR KAUR K. AMAR SINGH

Date: 30 July 2013

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