

E-HOTS in the Teaching and Learning Practice of UPSI's Arabic Language Trainee Teachers

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Abstract: E-HOTS refers to the use of electronic and technology elements involving the elements of Higher Order Thinking Skills (HOTS). This study seeks to investigate the use of E-HOTS in the teaching and learning practice of UPSI's Arabic language trainee teachers throughout the teaching practice period. The trainee teachers were to produce an E-HOTS and apply it in the Arabic language teaching and learning practice. The ADDIE instructional model and the Shulman Integration Model were used as the basis for conducting this study. This study involved 71 students from UPSI's Bachelor's Degree in Arabic Language with Education programme of September 2014/2015 intake, who had undergone a teaching practice in July 2017. This study used quantitative and qualitative data. The quantitative data were analysed descriptively to obtain frequency, percentage and average. While the qualitative data were used to examine the effectiveness of the use of E-HOTS in Arabic language teaching and learning practice. The findings of the study showed that the use of E-HOTS in the teaching and learning practice of UPSI's Arabic language trainee teachers was able to establish a student-centred teaching and learning activity and indirectly able to produce trainee teachers with versatility in teaching and learning practice, in line with the teaching and learning practice of the 21st century.

Key words: E-HOTS • Teaching and learning practice • Arabic language • Trainee Teacher

INTRODUCTION

The mastery of knowledge and skills on a knowledge discipline is important in building the strength of the national education system. This is because with the mastery of knowledge and skills, Malaysians will be able to compete with other countries in the new millennium. This is clearly outlined in the Long Term Perspective Plan 3 (RRJP3) presented in parliament in April 2001. The issues explained in the RRJP3,

“The shift in economy will increase the demand for skills and technological expertise as well as labour force, equipped with tacit knowledge and high thinking skills (pg. 156)... labour force has the ability to accept and adapt to demand changes due to technological advances in knowledge-based economy (pg. 156)... Schools curriculum will be reviewed to inculcate thinking skills and generate creativity and self-directed learning among students, especially at the primary and secondary levels (pg. 168)”. [1].

The content of RRJP3 clearly demands that school curriculum be reviewed to produce generations with thinking skills besides having creativity, among school children either at the secondary or the primary level. In addition, the need to provide a self-directed learning environment among students should also be emphasised. The demands in RRJP3 cover all areas of knowledge taught at schools in Malaysia, including the subject of Arabic language. Looking at the situation of Arabic language subject in schools all over Malaysia, RRPJ3 is a challenge that all Arabic educators need to address. Based on the scientific studies conducted, the data showed that the Arabic language teaching situation was still using traditional and stereotypical methods [2] and this had made Arabic language teaching and learning activity boring and cold and dull [3]. Apart from that, teachers were more focused on the *nahu* and grammatical aspects, making Arabic language teaching and learning activity structural [4] which eventually gave negative impact on the Arabic language teaching and learning practice.

Universiti Pendidikan Sultan Idris (UPSI) is a prominent public higher learning institution in the history of national education. UPSI is the sole public education university in the country that provides teacher resources to the entire country for a long time. It is the responsibility of UPSI to provide teacher resources as stated in the RRJP3. Therefore, the purpose of this study is to examine the aspect preparation of trainee teachers in teaching Arabic language subject by applying the higher order thinking skills during which a teaching and learning practice is conducted. The focus was given towards the integration of media technology in the teaching and learning practice to stimulate students' higher order thinking practices. The aspects of trainee teachers' readiness to integrate higher order thinking practices and technology media in teaching and learning practice of Arabic language subject include knowledge acquisition, technology utilisation skills in teaching and attitudes.

This study involved 71 students from the fifth semester of Bachelor's Degree in Arabic language with Education programme in UPSI, September 2014/2015 intake, who had undergone teaching practice in July 2017. These trainee teachers had undergone teaching practice around the states of Perak, Selangor and Federal Territory of Kuala Lumpur, which involved 37 schools, within 16-week period. This study looks at the readiness of the trainee teachers to integrate the E-HOTS element throughout the teaching period. E-HOTS was one of the teaching aids used by the trainee teachers during the Arabic language activities. The E-HOTS used by the trainee teachers acted as a variable which could also affect the effectiveness and success of teaching and learning activity. In determining the success of teaching and learning activity, it was influenced by various factors that act as a variable. This is because the practice of teaching and learning in one classroom may or may not work for other classrooms. It is influenced by many factors such as teacher's readiness, student's achievement level, teaching resource materials used and teaching period [5].

The main challenges faced by the trainee teachers were in integrating E-HOTS into Arabic language teaching and learning activity during teaching practice and for an effective operation of teaching and learning process. It will involve the aspects of mastering the fields of Arabic language, pedagogical and technological skills as well as the attitude of the trainee teachers itself. In the context of UPSI's trainee teachers, they had been trained to master all these aspects. All of the trainee teachers prior to the

teaching practice had attended the university's education courses beginning in the 4th semester. The trainee teachers had taken the KPD3016 (Teaching, Technology & Assessment 1) course in the 5th semester. These trainee teachers had earlier participated in the BAP3016 (Principles of Arabic Language Teaching as a Foreign Language) in the previous semester.

The trainee teachers had also been exposed to the teaching and learning theories, pedagogy and teaching methods used in foreign language teaching during this BAP3016 course. During the 6th semester, all trainee teachers are required to attend the KPD3026 (Teaching, Technology & Assessment 2) course. In this course, trainee teachers are exposed to the teaching aspects that involve the use of technology elements comprehensively, that will be applied in the macro and micro teaching processes. The need for knowledge and mastery in technology is important in order to help in achieving the objectives of teaching and learning practice activity in the classroom. These three courses are pre-requisite courses prior to teaching in school. They act as preparation courses for trainee teachers before carrying on to teaching in school.

The readiness of trainee teachers to integrate E-HOTS in the teaching process preparation is one of the main variables that will determine the success and effectiveness of teaching and learning activity. It is also an innovation used by teachers to focus teaching and learning activities on the students in line with the RRJP3 requirements. A teaching approach using a media kit for the students is an alternative in diversifying the use of teaching aids in teaching and learning activity. Today's generation Y is a generation equipped with advanced information technology facilities. In the preparation of becoming a teacher for this generation, these future teachers will need to master information technology well and apply it in class. It aims to encourage students' interest in learning as well as to diversify pedagogy in the classroom.

MATERIALS AND METHODS

This study was conducted in two designs, namely descriptive study and quasi-experimental study. Both of these study designs refer to the ADDIE's Instructional Model and the Shulman Integration Model [6]. ADDIE model is based on behaviorism, an idea developed by Dick and Carey [7] to design a learning system. A questionnaire instrument was used to identify trainee

teachers' attitudes and readiness towards the skills of using a media kit that had been integrated with the elements of HOTS in Arabic language teaching and learning practice. The instrument used in the questionnaire contains pedagogical knowledge, multimedia and attitudinal subscales adapted to the Foulger's study [8]. In addition, the positive Likert scale was also used for symbolism, scale 5 for strongly agree, scale 4 to agree, scale 3 to somewhat disagree, scale 2 to disagree and scale 1 to strongly disagree. The data obtained from the questionnaire were analyzed using spss software.

The quasi-experimental design used was aimed to see the effectiveness of the integration between the media kit and HOTS elements in Arabic language teaching and learning practice. The integration process of the media kit and HOTS elements in this study was adapted to the Shulman Integration Model. The quasi-experimental design was also used to make comparisons of students' achievement levels in mastering HOTS using media kit instruments and conventional methods.

In addition, this study involved three stages. The first stage is analysing the level of technology-based pedagogical skill mastery and the attitude of trainee teachers towards the practice of media kit and HOTS elements integration in Arabic language teaching and learning practice. The second stage is designing and processing a new media kit such as YouTube, powtoon, audio and so on, to be used in Arabic language teaching and learning practice. The Kon Dale hierarchy [9] was used as a guide in the preparation of this media kit. By referring to the technology integration model (TIP) by Roblyer [10], trainee teachers were required to integrate media kit with HOTS elements in the teaching and learning conducted. Theoretically, the trainee teachers did not have a problem in providing this media kit as they had attended the university course, which was Information Technology and Communication Competency (MTE3012) in the third academic semester. At the early stage, the trainee teachers were asked to provide a media kit in groups. The trainee teachers were distributed into 14 groups of which each group consisted of five or six people. These media kits produced in groups were then used by each group member during the teaching and learning practice at their respective schools.

The third stage is the final stage of analysing the effectiveness of E-HOTS in Arabic language teaching and learning activity. The E-HOTS effectiveness analysis was performed throughout each training period.

The effectiveness of the use of this media kit was analysed using the data obtained during the teaching and learning activity involving reinforcement and evaluation activities on the teaching and learning practice that had been carried out. Data were also obtained from the results of the reflection notes performed by the trainee teachers in the Daily Lesson Plan every time after a teaching and learning practice was done carried out. In addition, an exhibition seminar on E-HOTS was also conducted after the trainee teachers had undergone teaching practice. All trainee teachers were obliged to attend the university education course which was the Seminar on Reflection of Teaching Practice (KPR3012) course during the eighth semester. Among the students' performance assessments in this course was such that related to the reflection of the use of media kits in teaching practice. A one-day exhibition seminar was held and each group was asked to present the media kit produced to be assessed by the experts in the related field. Through the exhibition seminar held, the effectiveness of E-HOTS in Arabic language teaching and learning practice can be observed and analysed.

Data Analysis: The first objective of this study was to determine the level of readiness of the trainee teachers on the practice of integration of media kit and HOTS elements in Arabic language teaching and learning practice. A questionnaire was conducted to find out their readiness to use the media kit of HOTS elements in teaching and learning practice. This level of readiness is also closely related to the mastery of knowledge in the field of Arabic language curriculum, the mastery of media kit skills, pedagogical skills and a clear understanding of the HOTS elements in the current curriculum. All these aspects are the variables that influence the level of readiness of the trainee teachers in Arabic language teaching and learning practice. The questionnaire data conducted are as follows:

Table 1 shows the level of readiness of trainee teachers on the practice of integration of media kit and HOTS elements in Arabic language teaching and learning practice. Item 1 shows that 30 trainee teachers strongly agreed that they have mastered the Arabic language curriculum. While 35 trainee teachers agreed that they have mastered Arabic curriculum well. These data show that the academic structure offered in UPSI Arabic language programme is effective in preparing trainee teachers to master the Arabic language curriculum.

Table 1: The Level of Readiness of Trainee Teachers Towards E-hots

		1	2	3	4	5
1	Master Arabic language curriculum well			6	35	30
2	Know about and master the technology of educational media			15	45	11
3	Master the elements of HOTS in Arabic language curriculum			3	8	60
4	Know the suitable topics using media kit in			5	3	63
5	Interested and feel comfortable to use media kit in teaching and learning activity			3	10	58

Scale: 5 for strongly agree, scale 4 for agree, scale 3 for somewhat disagree, scale 2 for disagree and scale 1 for strongly disagree.

Table 2: E-hots Prepared by Trainee Teachers

	Topics	Field	Types
1	Maze Runner	Revision of the whole topic	Audio Visual
2	UNO & Roda Kehidupan	Revision of the whole topic	Powerpoint
3	Safar Saadah	Tourism	YouTube
4	E-Gambar	Vocabulary	Photo scan
5	Radio Ajaib	Verbs & Nouns	Audio
6	Interaktif Bahasa Arab	Building Sentences Using Verbs in Arabic	Application (off & online)
7	Permainan padan & warna	Building Sentences Using Nouns in Arabic	Powtoon
8	Kamishiba & Dam Ular	Teaching numbers	Power point
9.	Jumanji	Reading Skills	QR Bar code/blogspot
10	Kitab al-Zakiyyu	Group activities	Audio & Video
11	Rantaiku 7 Loket	Vocabulary	Audio & power point
12	Lubah al-Dhamair	Pronouns	Power point
13	Cakera Cerita	Listening Skills	Movie maker
14	Gina Arabiy	Reading Skills	Visual & powerpoint

However, there were 6 trainee teachers expressed that they disagree to have mastered the Arabic language curriculum well. This situation has raised questions and negative perceptions on the effectiveness of the programme's structure offered in the UPSI Arabic language programme. However, after the questionnaire and analysis on the overall performance of the six trainee teachers were done, the data showed that the factor causing the six trainee teachers to give a disagree response was caused by the factor of attitude of the trainee teachers.

As for item 2, the data show that 11 people strongly agree to "know about and master the technology of educational media", while 45 people answered "agree" and 15 people were at "somewhat disagree" scale. Through these data, it is shown that there were 15 trainee teachers who still disagree with the mastery of technology skills of educational media even though they had joined the courses related to technology during the academic semester at UPSI.

The data in this table also clearly indicate that most trainee teachers strongly agree that they have mastered the HOTS elements in Arabic language curriculum with a total of 63 people and also strongly agree that they know the appropriate topics for media kit and HOTS elements integration. This is because

before the trainee teachers went for teaching practice, they had been specifically exposed to the Standard Curriculum Document & Assessment (SCDA) from the ministry. In addition, the Teacher Apprentice Programme joined by the trainee teachers had also been able to provide a lot of information to the trainee teachers in relation to the school curriculum and the HOTS elements in Arabic language teaching and learning activity.

Item 5 is on the attitude preparation of the trainee teachers. Besides the mastery of knowledge and skills, attitude is also a variable that can determine the effectiveness and success of teaching and learning practice. The data show that 58 trainee teachers strongly agreed that they were interested and comfortable to use media kit in teaching and learning practice as opposed to 3 trainee teachers who responded "somewhat disagree". This data clearly show that most of the trainee teachers were very interested and comfortable to use media kit in their teaching and learning practice, in line with the current development.

Once the data of the trainee teachers' readiness were obtained, the next stage was the preparation of a media kit that had been integrated with HOTS elements. The media kits prepared by the trainee teachers in groups are as follows:

Table 3: Perception of Trainee Teachers Towards E-hots in Arabic Language Teaching & Learning

	1	2	3	4	5
1 Media kit is effective in improving students' understanding on the topics taught.				6	65
2 Media kit is able to gain students' interest with regard to the topics taught.				5	66
3 The media kit integrated with HOTS elements is suitable to be used in Arabic language teaching & learning practice.				1	70
4 The media kit used is able to give positive impact towards the trainee teachers' teaching & learning practice.					71
5 Trainee teachers feel comfortable preparing and using media kit in Arabic language teaching & learning practice.			3	10	58
6 The media kit used do consider the cost factor					71
7 The media kit produced has commercial value.				11	60

Scale: 5 for strongly agree, scale 4 for agree, scale 3 for somewhat disagree, scale 2 for disagree and scale 1 for strongly disagree

Based on Table 2, the trainee teachers had prepared a set of media kits to be integratedly used along with the HOTS elements in Arabic language teaching and learning practice. There were 14 types of media kits produced by the trainee teachers in relevance with the topics of the Arabic curriculum in schools. The media kits produced by these trainee teachers were comprised of existing software programs such as power point, powtoon, movie maker and some were also being innovated from existing software to generate a new application such as image scanning as well as off line and online sentences building applications.

The different variation of media kits produced indicate that the trainee teachers have the ability to generate innovations in Arabic language teaching and learning practice. The use of media kits in the classroom had indirectly changed the teaching and learning situation in which it was no longer teacher-centred, instead, the students had been actively involved. This situation has provided a meaningful experience to the students during teaching and learning activity.

Once the media kits that integrated the elements of HOTS were used in Arabic language teaching and learning practice at schools, an effectiveness analysis was carried out which covered the aspects of trainee teachers, students and the media kit itself. Data were obtained from reflective writing analysis in each daily lesson plan of the trainee teachers alongside the questionnaire instrument. Table 3 shows the trainee teachers response to the effectiveness of the media kit in integrating HOTS elements into Arabic language teaching and learning practice:

Based on Table 3, the trainee teachers, in general, have a positive perception towards the E-HOTS media kit in Arabic language which includes the aspects of students, trainee teachers and the media kit itself. In addition, the data also show that the media kit produced is economical and has commercial value. The trainee

teachers were also feeling comfortable in using the media kits in their teaching and learning activity to ensure the effectiveness of the teaching & learning process.

CONCLUSION

This study clearly shows that the trainee teachers of UPSI's Bachelor's Degree in Arabic language with Education programme, have mastered the knowledge related to Arabic language field, mastered pedagogical and technological skills as well as have had a positive attitude towards the integration of E-HOTS practice in Arabic language teaching and learning activity throughout the teaching practice period.

Apart from that, this study also shows that the academic structure offered by UPSI to the students of Bachelor's Degree in Arabic language with Education at UPSI, has the strength to provide manpower resources for education in Malaysia. Each trainee teacher in the field of Arabic language at UPSI has been provided with adequate knowledge, pedagogical and technological skills to produce competitive teachers, in line with current developments. Additionally, all these trainee teachers have also been instilled with the values ??and professional ethics of teaching to ensure they have a strong competitiveness and identity.

The media kits used by the trainee teachers had been able to integrate HOTS elements into teaching and learning practice at school. This media kit serves as a variable which has a positive impact on the Arabic language teaching and learning practice. The effectiveness of this media kit can be seen in the students' achievement and mastery on the topics taught at school. In addition, the media kit produced by these trainee teachers also has commercial value that can be developed to help strengthening the Arabic language that has been labelled as lifeless and passive. The innovations made towards the Arabic language teaching and learning

practice by the trainee teachers have indirectly been able to empower educational institutions in this country and uphold UPSI's name in national education.

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