

Teacher's Workload Influence The Usage of Technology

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Abstract— The purpose of this study is to investigate the use of technology in education at four technical and vocational school in Johor. It is to identify the obstacles faced by teachers in using technology in education, level of usage of technologies in education and learning as well as the relationship between both. This descriptive study has involved 165 teachers from 4 technical and vocational school in Johor Bahru which is consist of Sekolah Menengah Teknik Johor Bahru, Sekolah Menengah Teknik (Perdagangan) Johor Bahru, Sekolah Menengah Vokasional Tanjung Puteri, Johor Bahru dan Sekolah Menengah Teknik (ERT) Azidah, Johor Bahru. The researcher expects that there is a relationship between teacher's workload and usage of technology education. The SPSS Statistical Packages For Social Science version 16.0 were used by the researcher to measure the teacher's workload, the obstacles of using technology education and relationship between technology education used and workload. Overall, the study finds out there is a significant relation between teacher's workload and usage of technology education. A few recommendations have been made in this study to the relevant authorities on this problem and the study should carried out throughout the country to get more précised outcome.

Keywords-component; Academic, Workload, Non-Academic Workload, Use of Technology Education

I. INTRODUCTION

In this era of globalization, the development of Information and Communication Technology (ICT) has grown tremendously. In line with developments in the field of education require changes in teaching and learning methods. The Government provides various facilities for the advancement of education through the provision of technology from the World Bank to the school as television sets, video recorders and OHP (overhead projector), which cost millions of dollars [6] According to [34], through the 9th Malaysia Plan the government has allocated 2.3 billion to improve the facilities and ICT equipment in all schools across the country. So far, about 97 per cent of schools have had the equipment (Utusan Malaysia, August 29, 2006). The Ministry of Education has been supplying about 97,000 units and 70,000 units of laptop LCD projector to the whole school in Malaysia. According [50], recent developments witnessed in Information

Technology and Communication (ICT) becomes a major catalyst tool to disseminate and store information and help students build new knowledge.

Malaysia emphasizes the use of ICT in education as stated in the policy and development. According to [50] Ministry of Education has launched the Smart School program in early 1999 that aims to make systematic changes to the culture of the school by using technology as a facilitator in the teaching and learning process. Integrated Curriculum in Schools program (KBSR) also states that there should be a plan for the students to use a variety of tools and materials through a variety of techniques to produce an experience that makes the tech-savvy students and provide the experience of a variety of hand tools and materials. Indirectly, this will raise awareness of pupils to be sensitive to developments and changes in technology in the hope of creating a society that tends to new development based on science and technology.

However, efforts to use technology in education must be carried out continuously and optimally. This is because the teacher is the main driving force in the realization of this effort. Without teachers, the successful use of technology in education resources is impossible. However, a teacher workload is very heavy current causing teachers have less time to apply the information and communication technology resources fully in the teaching and learning process. Teachers are also burdened with other duties besides teaching intrinsic assignment as managing co-curricular activities, classrooms, student affairs, administration and clerical and other additional work that must be made in accordance with current requirements as stated by Deputy Prime Minister Tan Sri Muhyiddin Yassin (The Star, March 31, 2010).

following the example. Some components, such as multi-leveled equations, graphics, and tables are not prescribed, although the various table text styles are provided. The formatter will need to create these components, incorporating the applicable criteria that follow.

II. REVIEW OF LITERATURE

A. Teacher

Teacher are person that been appointed and been confirmed by Ministry of Education Malaysia. They are person to teach and guide students according to the task that already being set by the Ministry of Education Malaysia. Teachers need to teach, guide and educate students at formal education institution such as school based on the workload allocation to them.

B. Teacher Workload

Workload is a term that refers to the responsibility that must be assumed and performed by the same teachers have responsibilities in the classroom or outside the classroom to complete their homework. This workload can be measured by looking at the amount of time allotted to complete. Workload also means the amount of time used by a teacher to perform the duties of the academic and non-academic form either in the classroom or outside the classroom. Workload also refers to an official job responsibilities assigned by the school and they must be implemented by the teachers adopt a wonderful all the time.

C. Academic Workload

Academic workload tasks related to teaching and formal learning either in or outside the classroom. Academic tasks performed only by qualified teachers in certain areas only. Academic workload is divided into academic work and daily routine seasonal academic tasks.

Academic workload daily routine in the study include options teaching, teaching is not an option, make provision Record Book Teaches (weekly and daily), making teaching aids preparation tools (teaching aids) all the time, check and inspect all books student training, make the provision of teaching (reading, writing, drawing, etc.) and replace absent teachers(pain, course, etc.).

While seasonal academic workload covers monthly test question preparation activities, the provision of term or semester exam questions, preparation of trial examination questions, providing train-fire questions, check the monthly exam papers and marking term or semester examination answer. trial examination answer paper check, check-ups train the answer sheet, review and analyze student achievement, teaching classes, teach classes and attend recovery meetings subject panel.

D. Non Academic Workload

A non-academic job tasks performed by teachers in schools and this task can also be done by those who are not teachers. Non-academic tasks are tasks that do not involve formal teaching process. Duties include clerical task, specific tasks and duties cocurriculum. Duties not done daily academic named non-academic tasks and routine non-academic work done by non-academic summer seasonal job named.

Routine non-academic workload consists of recording all personal details and performance of the student record, taking attendance of students every day, and prepare students to fill a declaration form used for the purpose of issuing School Leaving Certificate, update 001M card, advising, guiding and motivate students, to make sure the class is always felt in a clean condition, make sure the class is always felt in a cheerful, or serving as Chief Counsel Club / Association, serving as the Chief Adviser Sports House, serving as Chief Adviser Games, serving as Head or Body Adviser or the Uniform Uniforms, carry out clerical duties, attending school meetings and special responsibilities.

Seasonal non-academic workload covers the following tasks preparation and production of monthly test paper (typing work, printing, sorting, distributing, etc.), preparation and production of examination papers term or semester (the work of typing, printing, organizing, distributing, etc.), preparation and production of paper - ups drill (works typing, printing, sorting, distributing, etc.), recording monthly test scores into teacher record books, recording marks for the term or semester in Record Book teachers and recording marks the trial PMR, SPM, STPM or teacher Record Book.

E. Educational Technology Resources

Educational technology resource in this study refers to the tool aids teaching (teaching aids) technologies such as computer-based, interactive CDs, disks, LCD (Liquid Crystal Display) projectors, video and television.

III. STATEMENT OF THE PROBLEM

The rapid development of the country with a variety of changes in community in preparation towards the 21st century will not alleviate workload at all levels, whether at the pre-school level through to higher education institutions. The task of teachers is becoming more challenging today. National education is the practice of looking on the agenda of the nation and always gets attention and that a substantial allocation from the government. This is because through education, people can develop themselves and for their future, their families and communities.

Current developments in the use of Information and Communication Technology was a priority in order to bring about change in education. Highly competent government with a view to diversify and use of Information and Communication Technology in teaching and learning at the school level to tertiary level institutions. However, there are complaints from the teacher where they feel overburdened with tasks that should not be held by the teacher. Clerical work had to be done by the teacher as well as providing teaching materials and teaching in the classroom. Many efforts by the government to provide Educational Technology resources in schools to improve the teaching process as well as the government's next mission. Provision has been devoted

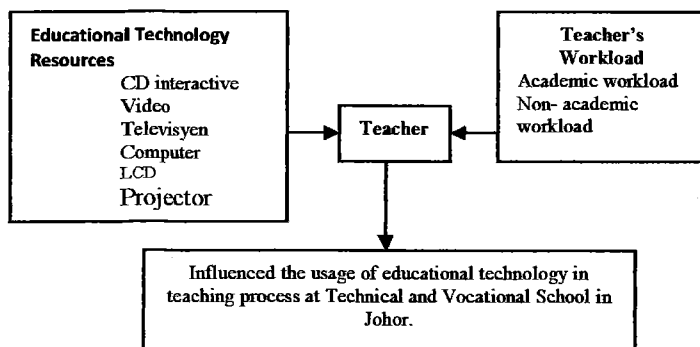
to the field of education in the 9th Malaysia Plan, specifically to increase the use of Information and Communication Technology (ICT) in education [34].

In addition, as stated in the Education Development Master Plan (2006-2010), have expressed the importance of Information and Communication Technology knowledge for the 21st century, the country faces new challenges from globalization, liberalization, internationalization and the development of information technology and communication technology (ICT). Thus, the Ministry of Education (MOE) to provide educational development program to produce citizens who are knowledgeable, ICT literate, skilled and honorable. However, in many teachers tell about the school workload growing even put pressure on them because they had to teach students in the classroom as well as making the work of non-academic side. These things lead to the involvement of teachers on the use of technology in teaching education is low.

Accordingly, this research is to know the extent to which a teacher's workload affect the frequency of the use of technology in teaching teacher education which in turn impact the level of student achievement in the classroom so that the findings can be used to assist the Ministry of Education or bodies related to take steps so that this problem can be solved. This study aims to give a true picture of the working environment faced by the teacher and hopefully this effort will help teachers achieve well-being and improve student achievement in education.

IV. THEORETICAL FRAMEWORK

Workload will be seen on the teacher. Workload is evaluated from two angles, namely workload in terms of academic and non-academic workload. The use of educational technology resource is measured by the frequency of use it in the process of teaching and learning. Use of Technology in Education is the dependent variable in this study. While the workload was an independent variable. Figure 1.1 shows the conceptual framework of the study.



This study aims to identify the teachers' workload at the Technical and Vocational school in Johor influenced teaching and learning process. This study also aims to determine the obstacle that teacher face to using the technologi education

resources in teaching and learning. Besides, this study also aims to identify the level of technology usage in teaching and learning. Lastly this study was identify the relationship between teachers' workload and technology usage in teaching and learning

METHODOLOGY

Population and Respondents

This study was conducted on the teachers at technical schools and vocational secondary schools in Johor Bahru. The population is 289 people. A random selection of respondents to ensure that all samples have the opportunity to choose from the respondents of the study. Thus, according to [31] sample that is required is a total of 165 people

Study Design

The study conducted a descriptive study, in which it is appropriate to explain about a problem or phenomenon that is taking place. The research design used in this research was a quantitative survey method using questionnaires. Survey research or survey studies selected commonly referred to as the one of the non-experimental research methods are most popularly used in various fields particularly in the field of social sciences. Survey research is also widely used in education. Survey that is used to obtain information from respondents that many hundreds or thousands of respondents [45]. This method is chosen based on several reasons as stated by [45], a comprehensive study on an issue or problem, fast data collection, the use of large sample sizes, the information collected directly from respondents in a short time and can make a general statement to a study population.

Research Instrument

In this study, the questionnaire used to collect data on teacher workload and resource utilization of educational technology in the teaching process. The questionnaire consisted of five parts, A, B, C, D and E. Part A represents the demographic data collection, part B represent questions about the nature of academic workload undertaken by teachers, part of the C about non-academic workload undertaken by teachers and part D answered questions about the obstacles use of educational technology in teaching resources. Lastly, part E about the use of educational technology resources.

Likert scale with five options used in determining the level of workload undertaken by teachers, barriers and resource utilization of educational technology in which respondents are required to choose one of these answers. Likert scale is used to classify the responses from strongly disagree to strongly agree on the distribution specified in the study. Table 3.1 shows the distribution of the Likert scale used.

Mean score for the data is adapt from Wiersma (2000) and Table 3.2 shown the mean score and the level.

Table 3. 1: Likert scale

1	2	3	4	5
Strongly Disagree	Disagree	Do not Agree	Agree	Strongly Agree

Table 3.2: Mean Score Table

Mean Score	Level
1.00 - 2.33	Low
2.34 - 3.67	Moderate
3.68 - 5.00	High

Sources: Adaptation from Wiersma (2000)

RESULTS

Research question 1: Identify the extent to which the teacher workload affect teaching at Technical and Vocational School in Johor?

Overall the mean study has shown that indeed there is a difference between the teacher's academic workload where research divide the academic workload into academic, routine academic and seasonal academic workload. Highest mean score for academic workload is 3.06 that is able to attend any courses or seminar for a long time. For routine academic workload which is workload that everyday teacher should done stated highest mean score of 2.63 that is teaching the subject. Lastly for seasonal workload that have highest mean score are 2.10 that is checking and marking examination sheet.

Table 4.1: Summary of Mean Score on educational technology resources use by teachers in teaching process

Mean Score	Level
3.01	Moderate
1.54	Low

Research Question 2: Are there educational technology resource use by teachers in the teaching process?

Educational technology resource use by teachers in teaching process is moderate because the mean score are 3.01. While there is also respondent said that Internet connection should be in school for them to search better information. The mean score only 1.54. The rest of the answer record low mean between 1.54 only. This is shows that technology resources used by teachers are low.

Research Question 3: What are the obstacles faced by teachers to use educational technology in teaching resources?

Most of the teachers said that they have problems in using the educational technology in teaching process. Majority of the teachers shown the highest means between 3.73 to 3.76. While parts from the teacher said numbers of computers that available at school lab is low therefore it is gave them obstacles to use the computer in teaching process.

Research Question 4: Is there a relationship between teacher workload with the use of educational technology in teaching?

For the analysis of the relationship between teacher workload with the use of educational technology in teachnig, the Spearman Rho shows correlation for the whole factor is 0.315. This suggests a positive relationship between teacher workload with the use of educational technology in teaching is low.

DISCUSSION AND CONCLUSIONS

The findings showed that the first objective of this study was possible because the researchers managed to obtain an overall mean value of the two aspects studied. This finding is in line with studies [26] found results report ACER (Australian Council for Education Research) in 1991 workload is seen as modest. But in 1995 workload is seen to be very heavy. Increased workload due to increased workload due to the development of management as well as training on the implementation of the new curriculum and assessment. Of the two studied workload, teacher workload which has the highest mean value of 1.81 academic workload. This shows that the academic workload is a key aspect contributing to the issue of teacher workload, although the mean value is at a low level. The findings of this study as the findings [26] stating that 71% of teachers in New Zealand feel heavy workload affect the quality of teaching, 75% indicated that their workload is very heavy, 21% thought of leaving school because the work load and 43% feel the workload will affect their health. Similarly, the findings of this study found that the level of satisfaction of teachers on the number of subjects they teach now is low with a mean of 1.71.

In addition, the findings showed that non-academic workload also has a mean value that contributes to the issue of teacher workload 1.73. This suggests that researchers can achieve the first objective. This finding is similar to studies [47] that most teachers have held a total of five types of tasks in the school at this time consisting of form teachers, special tasks and duties of the curriculum. Furthermore, the results of this study parallel with [12], the workload factor is the main factor that causes stress teacher. The findings of this study clearly show that the increase in teacher workload will result in less use of technology in teaching equipment resources. This is because it found that the teachers had to do clerical work in their seasonal routine and like to take attendance every day, writing letters, printing, recording and updating of student test scores 001M card. Besides they do not have time to check the students' exercise books. It is in line with the researcher where the item No. 7 in the questionnaire is the highest mean score of 3.21, which asks questions to the teacher clerical tasks such as writing letters, printing and so is

the job of a teacher. This clearly shows that most teachers do not agree with the question. [15], also said the workload to be one of the major contributors to stress among teachers because teachers have to do too much paper work, class preparation, make a report and send the report by the date specified. Besides teachers involved with the examination and report writing for students as well as the number of students per class is too many. Line with the findings by [26], 67% of those surveyed said the increase results in an increase to the management task workload. While 47 % indicated that the quality of the framework is a contributor to the work load, 55 % found the curriculum because increased tasks and 63.9 % felt preparation for teaching cause teachers need more time to ensure their professional development.

The findings showed that as a whole all the items in Part D has achieved the second objective of the study to identify the barriers faced by teachers for teaching resources Technology in Education. The researchers managed to get the mean score for the obstacles in teaching. Overall, the use of barrier technology resources in teaching in secondary technical and vocational schools in Johor is at a moderate level. Aziz and Ash (15) also found that a study conducted on 318 teachers in secondary schools in North Florida found that communication and top management support as principals needed for a teacher to carry out daily tasks at school. With the support of the administration, the teacher will give a better commitment to achieve the objectives set. However, contrary to the findings of the study and [12] in which the mean score was in the moderate level of agreement. This may happen because there are other factors that influence other teachers shyness and lack of encouragement from the school and other teachers.

However, researchers have found that the barrier is at a high level is no knowledge to use educational technology in teaching resources, lack of interest in using educational technology in teaching resources and prefer to teach by using blackboard and chalk only an obstacle to these teachers for the use and application of educational technology resources. This finding is in line with the study of [5] stating that the teacher still has the attitude of a phobia, fear and embrace change because of negative prefer to use the old method based textbooks, handouts or writing on green board only.

The findings of the study [29] the lack of resources such as the shortage of classrooms, lack of computer labs, computers and software is an important factor to teachers who need the equipment for teaching. Furthermore the subjects he taught was associated with such devices. If this resource shortage occurs, it will cause teachers to be less motivated and depressed because it can affect the quality of teaching. It shows that the researcher also agree because the findings [29] found that most of the educational technology resources in schools have been damaged and not repaired, other than the number of inadequate educational resources for all teachers. Researchers have found that the use of educational technology in teaching resources on the whole at a moderate level of agreement. This finding agrees with the study by [26] who found that the principals, managers and teachers to use different communication technologies and multimedia in

every school but overall use of technology and multimedia communication is poor.

Researchers found that the lack of the number of computers in schools delay making them work at a moderate level. This means even though the number of computers in schools is low, it still does not affect their work. This finding is contrary to the findings of the study [9] which states that the main factor affecting the climate in turn contributes teacher stress is the lack of technological equipment and student discipline problems. The study also found that teachers do not agree that a computer lab with class distance does not prevent to use educational technology in teaching resources. Mean score level is at a moderate level. This meant that teachers need an easier accessibility to resources so that they are using technology in the teaching process in the classroom. It is in line with the findings of [5] that ICT is a medium- assisted instruction and the level of ICT aided teaching history is still at a low level. Although the findings showed that teachers in low level to help accelerate the process of teaching, this does not mean no technology resources to help teachers. [28] stated that the findings of this research, teachers' readiness to use ICT is closely related to positive attitude in accepting the change in strategy and teaching methods. In addition, the findings of the researchers also found that teachers feel there is no need of Internet resources in the school to help them find the information is contrary to the findings [26] who say the lack of equipment and resources at school and at home are significantly with the amount of workload made outside of school hours and at home.

In general the results of this study of the Pearson correlation test showed a significant relationship between workload and resource utilization of educational technology at a very weak level of $r = 0.135$ with $p < 0.00$. Therefore, the null hypothesis is rejected because the value of $p < 0.05$. This means that there is a relationship between workload and resource utilization of educational technology.

Therefore, the role of teacher workload, whether academic or non-academic permanently affect the level of resource utilization of educational technology among teachers in vocational and technical schools in Johor Bahru, though weak. This may be due to some aspect that makes them less sure of the connection workload with the use of educational technology resources. Therefore, the measures that can be taken by the school is to ensure that education technology is easily accessible and used by all teachers. In addition to ensuring that educational technology equipment resources available are in good condition. In addition, the workload should also be reviewed so that the distribution system workload is equally regardless of rank or seniority.

RECOMMENDATIONS

Future research recommendations proposed to Ministry of Education Malaysia to identify problems related so that solutions can be taken such as add the numbers of teacher's assistant or increase the number of teacher to reduce the workload. Besides, Ministry of Education should strengthen any subject that use technology education in the process of

teaching and learning must apply all the resources that have in the schools. Future research also could recommend to the administration of schools should divide any workload equally among the teachers. It was also suggested future research will be able to broad the scope of respondent to all over the country so that big picture can be determined, add more research questions on the relationship of teacher's workload with the experience of working, level of education, age and gred of service either have any justification about total numbers of teacher's workload been given.

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