Education Technology Policy In Teaching And Learning

Christina John
Mohamad Bin Bilal Ali (Utm)

Abstract

This research is to develop a Education Policy Technology in teaching and learning. The process of developing policies work involves the Delphi technique works. The Delphi Technique implementation process chosen by the researcher which it involves five rounds? Seven qualified experts appointed by the expertise and have the criteria in the policy area. The policy was developed based on the standards ISO 27001 and Security Policy Information and Communication Technology for the Public Sector by MAMPU (Malaysia Administrative Modernization and Management Planning Unit). Integrated Model Delaney in Development Policy adopted by researchers for the process of developing the policy area. Future policy development outcomes can be applied at the Institute of Teacher Education In Malaysia (ITEM) and indirectly provides a guide to future teachers who will be placed in primary schools as their guide in conducting teaching and learning in technology education. The final formulation of collecting data represent the opinions and comments of experts which will be used as a complete production of the draft policy.

Introduction

Effective use of information technology also depends on the openness educators receiving element of information technology in teaching and learning, planned by them. Teacher educators, for example, which is the heart and backbone that generates the effectiveness of education as a whole, we find more and more of them are already savvy. If five years ago, almost no teachers in Malaysia know what the Internet is what they use the Internet. Now the number of teachers who have access to the Internet is increasing but they have assumed that information technology is a need to simplify the process of teaching and learning, Kozma (2010). Rapid expansion in the use of information technology in education is one of the bright road to success world-class education. This statement is supported by Abdul Rahim Mohd Saad (2001) in his paper presentation Awareness of parents on the importance of the use of information technology has helped their children use this technology more effectively.

Teaching profession is directly involved as well as a trend to influence the ideology of the 21st century. Information Communication Technology (ICT) have a major impact on the displacement of the change management system and education in developing countries such as Malaysia. The information revolution that occurred due to advances Tecnologi Education (TE) gives new challenges to the teaching profession, as well as the progress that is taking place need to be utilized to enhance the prestige of the teaching profession who are facing changes in the 21st century. Development of new educational knowledge TE requires a fundamental shift in the role of education and the teaching profession. One shift plan for educational development in Malaysia, namely utilizing TE to improve the quality of learning in Malaysia. Developing countries need more teachers who have specialized knowledge of TE. Teacher education training also requires a change in the paradigm shift to produce teachers who are qualified and able to educate and develop the society and the state. Therefore Training Institute as a leading university education profession changes should develop a comprehensive
education management system, innovative and systematic use of Information Communication Technology to establish a policy of TE in teaching and learning.

This profoma was first enacted in 2006 is the reference lecturers to conduct teaching and learning. Previously Syllabus subject TE is used as a guide by the lecturer. Profoma has been enacted since 2006 until now never updated or no improvement to improve their skills in terms of TE. Thus researchers expect with this study it will be able to improve in order to improve skills in the field of TE to balance in the current challenging technology. If there is only performing it means it will not be required to use or not required to the lecturers to follow. No action will be taken if the lecturers who do not follow the profoma. This is a weakness that is taken into account by the researcher. Therefore, with the development of a policy on teaching and learning, then it is obvious that policies are developed, which was approved by the MOE should be followed and shall not be denied by the lecturer or trainer.

The research

The aim of the study was to develop TP policies in teaching and learning for IPGM which plays an important role in achieving the mission of alerts and Educational Technology Division under the Ministry of Education to:
i. Ensure that the skills and techniques in teaching and learning TE can be used wisely and more systematic follow the policy formulated.

iii. Ensure policies used by the lecturer in the Institute of Teacher Education In Malaysia (ITEM) constantly updated according to current developments. This policy will be monitored at least every three years.

iv. Ensure that students have a level of competence commensurate with TE progress in the era of globalization.

**Objectives**

i. Determine policy areas TP in teaching and learning needed for teachers in primary schools.

ii. Teaching and learning to produce a policy adopted in the Primary School Teacher Training Program in Malaysia

iii Getting feedback acceptance among stake holder policy

**Model Framework**

Delaney (2002) suggests an integrated model of policy development proposed is a method of development policy in the service of educational equity. For researchers, developing policies to newness model should be available. Integrated model produced by Delaney (2002) for the development of a systematic policy in Germany in 2000 was very successful, so the researchers chose this model to be adopted as a guide to develop the policy at the Institute of Teacher Education.
Literature Review

The Delphi technique is a process shaped anonymous because no significant interaction between experts and it is done in several rounds. It usually consists of three or four rounds aims to get feedback in a systematic and subsequently received approval or consensus of all experts. This process is also a prediction that was made for something that will run next, namely as a result. This assertion is supported by Saedah Siraj (2008). In addition Custer (1999) explains that the Delphi technique was introduced in the United States in the early 1950s by the RAND Corporation is to predict the future defense needs. This technique aims to obtain information through the involvement of a group of experts whose views or feedback related to an issue they are needed. Lidqvist (1956) defines the Delphi technique as follows,

“The Delphi method is a method for the systematic solicitation and collection of judgments on a particular topic through a set of carefully designed sequential questionnaires interspersed with summarized information and feedback of opinions derived from earlier responses”.

DECISION MAKING PROCESS

IDENTIFY NEEDS

DIAGNOSIS AND FORMATION ALTERNATIVE

IMPLEMENTATION SELECTED ALTERNATIVE

EVALUATION AND SELECTION ALTERNATIVE

DECISION MAKING PROCESS IN DELPHI METHOD by Lidqvist (1956)
Research Methodology

Samples review according to Fowles (1978) he did not agree that the names listed expert. He affirms that all feedback from experts is difficult and controlled.

Summary Table of specialist expertise

<table>
<thead>
<tr>
<th>Department / Ministry</th>
<th>Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Education Malaysia</td>
<td>1 person (Expert no.1)</td>
</tr>
<tr>
<td>Institute of Teacher Education In Malaysia</td>
<td>4 persons (Expert no.2,3,4 and 5)</td>
</tr>
<tr>
<td>State Educational Technology Division</td>
<td>1 person (Expert no.6)</td>
</tr>
<tr>
<td>University</td>
<td>1 person (Expert no.1)</td>
</tr>
</tbody>
</table>

Cuhls (2002) supports the view that the selection of experts appointed shall be in accordance with the criteria of expertise in the field of research and a basic guide to selecting the sample. The study of these individuals have the experience, knowledge and expertise in developing policies Technology at the Ministry of Education or the University and these skills at least more than 10 years. These individuals have experience working as an educator in the Ministry of Education or university for more than 10 years. These individuals willing to participate in the five round Delphi study. One memorindom understanding to the individual disediakah commitment by researchers to be signed by the experts.
3.1 Study Design Researched

Design phase of the study in the order as follows:

**PHASE I**
- Action and preliminary study
  - Use / Difference
    - Malaysian IT policy and
      - Foreign countries
    - Proforma IT courses
      - in the institute and universities
  - Use Instruments Reviews
  - Validity of instruments

**ROUND 1**
- (Pre-Study)
  - Appoint 2 Experts
  - questionnaire
- The findings of the expert formulated (Mean frequency)

**PHASE II**
- 7 appoint experts
- Field surveys - Soal Policy
- 5 Round in work processes
  - Using the Delphi Technique
  - Integrated model by Delaney
- To determine the progress development field
- Progress

**ROUND 2, 3, 4**
- The preparation process involves 7 policy experts using Delphi technique (five rounds)
- Assessment Instruments
  - Questionnaire
  - The expert consensus, consensus 7 (Mean frequency)

**ROUND 5**
- The validity of the policy (10 people)
- Policy IT in teaching and learning
  - Provided to complete all the experts.
  - Guest reception "stakeholder"
  - Conference

**PHASE III**
- Summary of the agreement by all experts

![Figure 3.1 Study Design](image)

Research to develop the field of IT policy in the teaching and learning process of working with researchers using delphi technique in which they involve five rounds. The researcher has designed a round in the picture below.

**Research Instruments**
Implementation of this research involves two main phases: Phase I is the interviews with experts who have been appointed to identify areas of policy development in teaching and learning. While Phase II is a questionnaire identifying policy areas to be developed.

**Data Collection Procedures Review**
Use descriptive statistics median and interquartile range used to obtain the results. All feedback from the experts for all three rounds will be analyzed to obtain a consensus with respect to expectations when developing ICT.
policies in teaching and learning. Some of the data analysis will be done thematically. Data collected in this study conducted in two stages First and second stage. Data will be analyzed statistically

The median score for the approval of the effect:
- Strongly agree = 3.5 - 5.00
- Agree moderate level = 2.5 - 3.49
- Disagree = 1.00 to 2.49

Interquartile range calculation used to determine the relationship of each item with each expert to enable interpretation of consensus for each item done. Determined by the level of consensus score interquartile range is as follows:
- Height = consensus interquartile ranges between 0 to 1
- Simple consensus interquartile range = 1:01 to 1.99
- No consensus interquartile range = 2.0 and up

Rating Analysis (Analysis)
Before the policy was developed, some of the analysis should be made to facilitate the development process and timetable for this process will be a guide for researchers to carry out in accordance with the statutes kaljian following table:

<table>
<thead>
<tr>
<th>Schedule construction process with an expert questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>implementation period</strong></td>
</tr>
<tr>
<td>deadline</td>
</tr>
<tr>
<td>handover</td>
</tr>
</tbody>
</table>

Conclusion

Expectations draft policy area that is formulated by the word kepakatan of seven people appointed experts are tabulated below

<table>
<thead>
<tr>
<th>Table 1: draft policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>3.1</td>
</tr>
<tr>
<td>3.2</td>
</tr>
<tr>
<td>3.3</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>4.1</td>
</tr>
</tbody>
</table>
4.2 - Curriculum Delivery System
4.3 - Teaching Evaluation System
4.4 - Infrastructure, Equipment and Environment Teaching and Learning
4.5 - IT in Teaching and Learning Performance Communities based on EDU 3105 performance – Visitor in Teaching and Learning

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Security policy in the teaching and learning of IT</td>
</tr>
<tr>
<td>6</td>
<td>Operations Management Communication</td>
</tr>
<tr>
<td>7</td>
<td>Curriculum Design Review</td>
</tr>
<tr>
<td>8</td>
<td>Continuous Improvement</td>
</tr>
<tr>
<td>9</td>
<td>Others - other (Guest)</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>19</td>
</tr>
</tbody>
</table>

**Recommendations Advanced Studies**

This study could also lead to further research related to policy development Institute of Teacher Education In Malaysia for teaching and learning. The researcher suggested that use this policy approved by the MOE. It is based on suitability and agreement obtained by researchers from a survey conducted on behalf of the Director Teacher Education In Malaysia, Lecturer, Principals, Headmasters and ICT Teachers. In addition, researchers also engage individuals such as parents and ICT lecturer at universities in Malaysia.

**Implications of Findings**

The findings of this study can provide certain benefits to the community of educators in general and in particular to the lecturer or lecturer and students.

**Lecturer or Educators**

The findings of this study are expected to function as a lecturer in the future no longer be an agent of science communicators but more to the task of being a mentor or coach who led the students meneari information or knowledge. These phenomena are consistent with future developments that support learning system tech, global concept and focuses on developing students actively and meaningfully.

**Teachers and Trainers**

The development of this policy can be used as a guide and also help teachers to plan lessons and higher skills.

**Closing**

The overall goal of this study was to achieve its objective of developing policies Technology eduction in teaching and learning by using the Delphi technique. Any resistance encountered while conducting this study for researchers is an experience that can be used as a guide to achieve a goal. In the era of globalization that centers on the development of information and communication technologies, the development of education and mastery Technology eduction conscious culture among trainees. Updates in technology have made in this era of globalization. Many challenges need to be implemented to ensure the success of these reforms. Among the lecturers should constantly strive to improve themselves, always make reflection in teaching and learning process, encourage pupils to be more independent, and implement the spirit of cooperation and collaboration in the classroom. Lecturer together with the trainees must foster lifelong learning to ensure the construction of critical thinking and technology skills are always integrated within the policies developed.
References


