

**INVENTING NEW ITEM ANALYSIS TECHNIQUES FOR EFFECTIVE
ITEM BANK SYSTEM**

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Abstract

With the suggestion of abolition of centralised public examinations like the primary six UPSR in 2012 and the lower secondary three PMR in 2015 and a global trend towards decentralising summative assessment, there is increased attention given to formative school and classroom based assessment. Therefore, to fulfil this need, this study aimed at developing and evaluating a user-friendly electronic item analysis and item banking software with the name of SuperSeTIA. At the same time, this study also sought to identify the relationships between teachers' competency (knowledge and skills), perceived usefulness, perceived ease of use, attitude and the intention to use the proposed system (SuperSeTIA) among the targeted teachers through a three stage evaluation process. In line with these objectives, a mixed-method descriptive-correlational research design was chosen to describe the variables studied as well as the relationships between the variables of interest. Therefore, instruments such as questionnaires, semi-structured interview questions and checklists were employed to gather data pertinent to the study. The findings from this study revealed that respondents with acquired basic computer skills are ready to use a computer-based item analysis software to assist them in their tasks although their knowledge relating to the different types of item analysis software in the market are limited. The findings also suggested that there is a tendency among the respondents towards using technology when they believe that it can enhance their job performance. The final two stages of evaluation showed that SuperSETIA managed to fulfil the ease of use criteria although in the initial evaluation stage the respondents did indicate that it was difficult to use. Overall findings from three stages of evaluation indicated that even though SuperSeTIA is a new technology, the respondents held positive perception towards SuperSeTIA with moderate intention to use it. With regards to the relationships between the variables, the results suggested that perceived usefulness but not perceived ease of use, and attitude towards computer use were the most determinant factors in the intention to use technology. The perceived ease of use and intention to use SuperSeTIA were also identified at the moderate level even though there was no significant relationship identified between perceived ease of use and intention to use SuperSeTIA. These findings highlighted the positive impact of the software and respondents' positive attitude towards the software. In addition to that, this study also demonstrated that SuperSeTIA has fulfilled the basic criteria of technology acceptance model (TAM). In relation to the usefulness of SuperSeTIA, it was indicated that generally respondents were satisfied with the effectiveness criteria of the software, and the program content of the software. Majority of the respondents also agreed that the software is able to prepare teachers for real-world item analysis and teaching enhancement. Additionally, this study has helped the researchers identify some key issues related to the user interface, audience appeal, navigation and presentation of the software which proposes an enhancement to the user interface and navigation in the program. Last but not least, it is believed that with further exposure and training, SuperSETIA can be widely accepted and used among the target audience. Therefore, it is crucial for the ministry, state education departments and district education offices to work hand in hand towards promoting item analysis and ICT skills among the teachers because this on the long run, will benefit all the stakeholders and help the nation achieve its aspirations for the education sector.

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LAPORAN KAJIAN PENYELIDIKAN
TAJUK PROJEK: INVENTING NEW ITEM ANALYSIS TECHNIQUES FOR
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Dengan segala hormatnya perkara di atas dirujuk

Bersama-sama ini disertakan 2 (DUA) naskah laporan akhir dan satu salinan CD yang bertajuk seperti di atas untuk perhatian dan tindakan pihak tuan.

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TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF SYMBOLS AND ABBREVIATIONS	viii
Chapter 1: Introduction	
Background of the Study	1
Problem Statement	4
Purpose of the Study	7
Research Objectives	7
Research Questions	8
Significance of Study	9
Operational Definition	9
Chapter 2: Literature Review	
Concepts of Assessment	12
Type of Assessment	13
Assessment of Learning	13
Assessment for Learning	14
Assessment as Learning	15
Ensuring Good Classroom Assessment	15
The Challenges of Developing Fair Assessment	17
Model of Item Analysis	19
Classical Test Theory	19
Item Response Theory	19
Rasch Measurement Model	20
The Procedures for Conducting Item Analysis	21
Item Analysis	25
Item Banking	
Item Difficulty	25
Item Discrimination	25
Computer Adaptive Software for Item Analysis	26
The Technology Acceptance Model (TAM)	26
Knowledge about Item Analysis	27
Perceived Ease of Use	28
Perceived Usefulness	31
Attitude toward Using SuperSeTIA	31
Intention to Use	32
Conceptual Framework of the Study	33
	33
	34